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—SUSTAINABLE LIVING AND PLANET CARE—

EARTH GARDEN

— BUSH OR CITY ALTERNATIVES —

1435 $4.50 4 EARTH GARDEN

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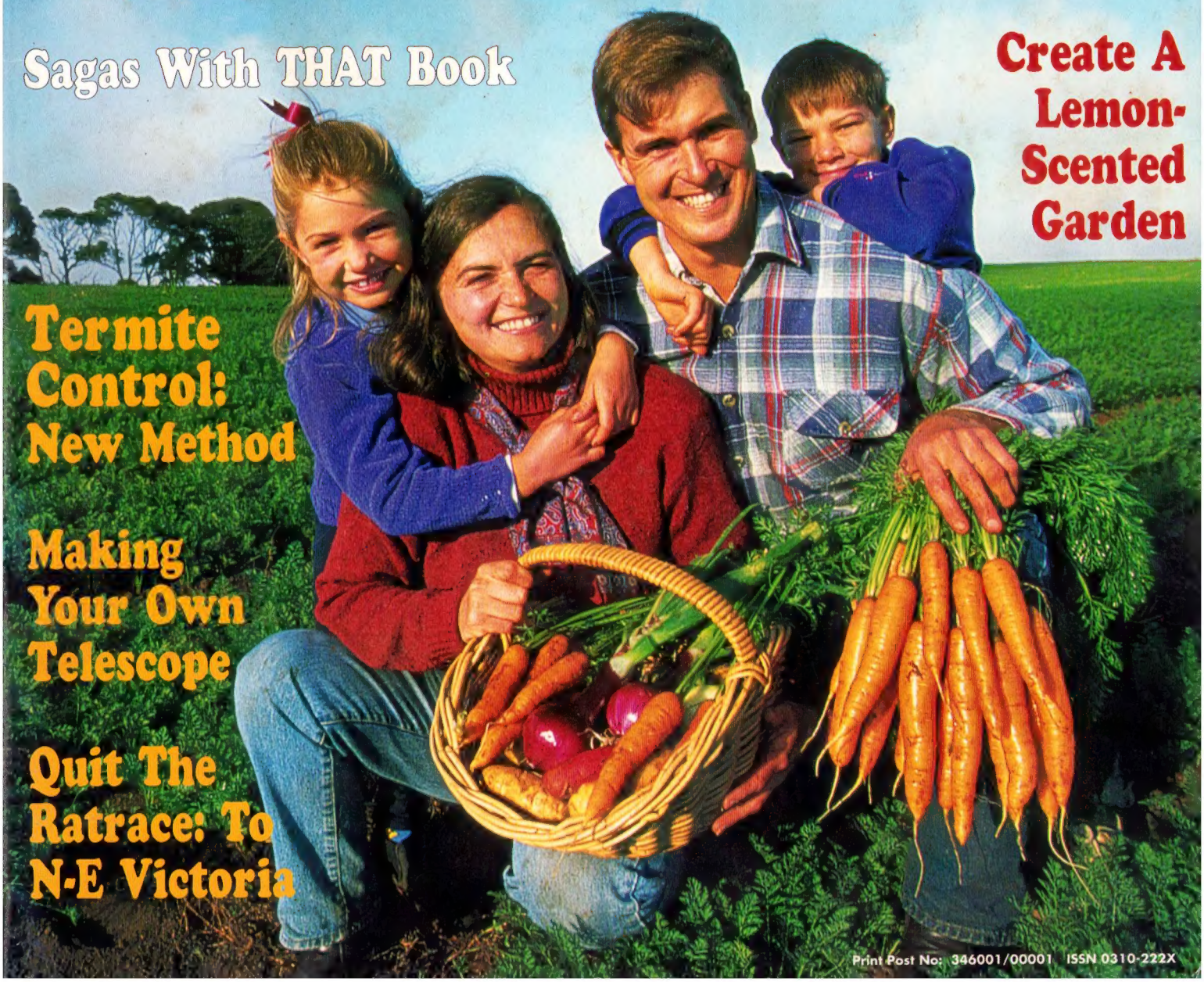

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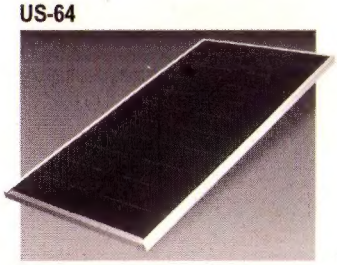
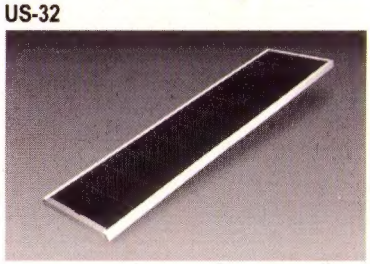
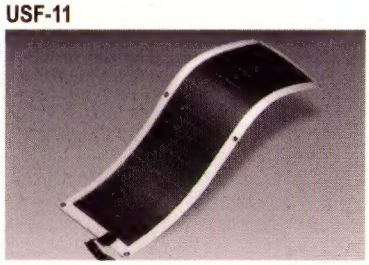
US-64



US-32



USF-11



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Width (mm)	741.2	741.2	382.7	382.7	383	205	205
Depth (mm)	31.8	31.8	31.8	31.8	22	22	22
Weight (kg)	9.17	6.27	4.8	2.99	1.63	1.13	0.77

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Front Cover: Harvest time in the paddock at Fernleigh Farm, near Daylesford, Central Victoria, for Fiona and Nicholas Chambers with their children, Katrina and Martin. Fernleigh Farm produces top-quality, fresh organic produce — mainly carrots, that are in demand overseas and throughout Australia.
Photograph by Sandy Scheltema

EcoTax: This issue's EcoTax will go to Friends Of the Earth, Fitzroy, for production of materials about the proposed radioactive waste dump in the Billa Kalina region of outback South Australia. For more details about FOE's anti-nuclear campaigns contact FOE Fitzroy at 312 Smith Street, Collingwood, Victoria, 3065, or phone (03) 9419 8700 (email: foefitzroy@peg.apc.org)

– SUSTAINABLE LIVING AND PLANET CARE –

EARTH GARDEN

– FOR BUSH OR CITY ALTERNATIVES –

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Founded by Keith & Irene Smith, 1972.

EARTH GARDEN is Australia's original journal of sustainable living and alternatives. It is a forum of practical ideas, shared knowledge, sources and a guide to alternatives to high-consumption lifestyles. It's about putting a roof over your head, growing your own food organically, aiming for appropriate, renewable home energy systems and surviving — and thriving — in the city or the bush, with the inner changes which follow when you're in harmony with Nature.

EcoTax: each issue we donate a portion of the cover price to a community group involved in tree planting or conservation projects to help balance the use of the partly recycled paper used for printing *Earth Garden*. We would like to see all publishers pay an EcoTax.

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Contributions to *Earth Garden* are welcome: sharing information and experiences with other readers strengthens the network of Earth Gardeners. Photos and illustrations are important. Please write first with your story idea. Subscribers are sustainers: for subscription details see page 88.

We welcome advertisements appropriate to the aims and ideals of *Earth Garden*, but reserve the right to refuse ads at our discretion. Contact us for display rates.

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(We don't have the resources to staff telephone enquiries: please write or fax.)

Beyond The Bitumen

Dear readers,

Welcome to the winter issue of *Earth Garden*. Our vegie garden is just winding down for winter as I write this. We've had a wonderful spring, summer and autumn, with tomatoes still ripening into May, a bumper sweet corn crop, lots of brassicas in the ground for next spring, and next week — I hope — we'll be planting a big garlic patch.

In cooler parts of the country the old folklore says that you plant garlic on the shortest day of the year, and harvest it on the longest. At least that's what our permaculture writer, Bruce Hedge, tells me and I repeat his bit of folklore whenever I get the chance. Bruce then told me years after spilling the beans about this one, that he actually plants his garlic a month before the shortest day, ie in late May, so even when I nick someone else's bit of folklore, I still don't get it right.

Bertie is now 21 months old, and one of his favourite habits over summer and autumn has been wandering into the vegie patch where he keeps a dessert spoon on hand next to the carrot patch. He digs himself some baby carrots, and proceeds to knock them of without worrying about inconvenient things like the carrot tops, or bits of dirt. He may have a younger brother soon, although I'm hoping he'll have a daughter: Judith and I are expecting a baby in October, and I'm very, very excited. The older I get the more I seem to like the idea of having heaps of babies around (maybe the chronic lack of sleep has made me demented) but after three sons, I wouldn't mind getting to use a girl's name for a change: I've had a few girls' names stored up for 15 years now.

A friend of mine recently commented that he didn't know how the hell Judith and I find time to think about babies — especially during our recent battles with the woodchip industry over attempts by the National Association of Forest Industries (NAFI) to ban our book, *Forest-Friendly Building Timbers*. April certainly was a wild month because of that furore, but I like to think that out-populating the woodchippers is one way to win! Karen, Shelley, Tracey, Linda, Doug, Tony and Anne all worked tirelessly during this rather stressful time when we didn't know if NAFI were going to succeed or not.

I'm lucky and amazed that they all still come to work at *Earth Garden* after so much high-pressure work. It's been an exhausting period for us, but at the end of it, we get to work for *Earth Garden* and its loyal family of readers, whereas NAFI have to work for NAFI and their ilk.

For those readers interested in this saga, there is an update elsewhere in this issue.

There are now many more new Earth Gardeners out there in newsagency land. We don't know where you've all been hiding all these years, but the past two issues of *Earth Garden* have been extremely popular — three thousand more people bought the summer issue than the one before it. Welcome, and be warned: as regular readers of the magazine know, our contents can swing from 'techy', solar and wind power stories, to outback travel pieces about escaping deserts using photovoltaic panels, to cutting edge environmental activism, to old-fashioned advice about growing lavender, and all points in between.

We still have a couple of filing cabinets full of articles that we never seem to find room to publish, and we receive more than a hundred letters to the editor every week, but we're actually cataloguing all the articles and we're working on ways to publish everything — unless it gets banned.

Happy winter and happy reading,

Oops! Watt Do You Mean?

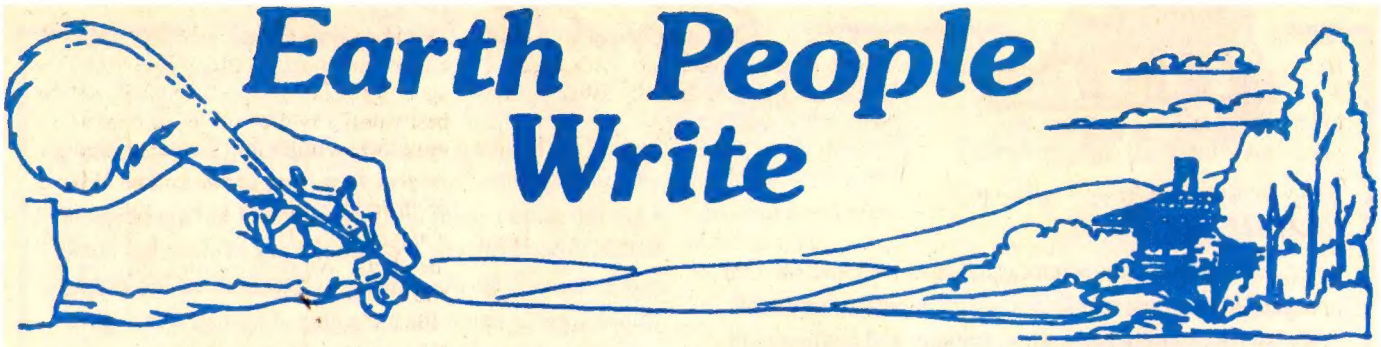
In the 'Solar Special' in the previous issue of *Earth Garden*, somehow every time we meant to say amps, we said amphours, in the article about four different-sized solar-powered houses on pages 42 and 43.

We're sorry for the confusion we caused. Watts *divided* by volts equals amps. Amps *multiplied* by hours equals amphours. Our best advice is to buy Peter Pedals' catalogue *Energy From Nature*, from the Rainbow Power Company to clear up any misunderstandings. Phone (02) 6689 1430 to order a copy.

Competition Winner

Ms Kerryn Croke, of Blackburn, Victoria, is the lucky winner of $750 worth of *Earth Garden* books and magazines. 1000 other *Earth Garden* subscribers win a free index to the first one hundred issues of *Earth Garden*. These winners will receive their index with this issue of the magazine.

Earth People Write



***Earth People Write* is an open forum. The views expressed in letters from readers do not necessarily reflect the opinions of *Earth Garden*. Letters are always welcome, but please keep them concise.**

Book comes at the right time

Hi all,

Just wanted to let you know that I finally managed to track down the *Forest-Friendly Building Timbers* book after visiting a number of bookshops in Brisbane. The books had all sold out and most shops had more on order — proof that people are really hungering for that sort of information. For me it has come at just the right time as I'm hoping to start building later this year. The information is exactly what I was looking for, so congratulations to Alan and Anne.

Can I just say how outraged I was at the timber industry wanting the book banned! I've also made the decision not to patronise BBC shops anymore and I will write to them and tell them the reasons. If there's any silver lining to this cloud, the furore the book has caused has at least provided some extra publicity. So hang in there Alan and the rest of the team.

Keep up the good work at *Earth Garden*. I've been a subscriber now for at least five years and I always look forward to receiving the magazine. Over time, I've also purchased a number of *Earth Garden* publications. I always find them really useful, easy to read, and packed with practical information that I can use.

Thank you for being a shining light in environmental and social justice. I'd love your team to come up to Queensland some time so I can meet you face to face.

All the best,

Athena

Support for free speech

Dear Alan and Crew,

I have just read an article in *The Age* about your timber book and the legal threat.

I would like to offer my support to your stance against this disgraceful effort to stifle free speech by a large corporate group with very damaging interests. Please let me know if I can be of any assistance.

Yours sincerely,

Glenn Willcox, <glennw@acr.net.au>.

Hot and dry but so wonderful

Dear Earth Garden,

Not unlike the wildebeest migration across the Serengeti (Though probably more akin to a scene from 'Ma and Pa Kettle' or 'Steptoe and Son') and like so many before us, we too have now made the great journey out of pollutionville to our own bit of paradise (albeit a very dry one!) here in Newstead. We are looking forward to building our own self-sufficient home over the next couple of years and slowing down our lifestyle to give us a better quality of life.

I feel quite sure that your magazine will provide us with a wealth of knowledge and tips to make our journey that little bit easier. I also hope that we may be able to return the favour by providing you and your readers with things that we will learn along the way which may help others.

Thankyou again for the marvelous effort that you all make to produce such an excellent and worthwhile magazine amid a sea of wasted trees strewn across the newsagent racks.

Dean Mclaren and Caroline Cook, Newstead, Vic.

An alternative place to live

Dear Earth Garden team,

I'd like to thank you all for this great mag. It's probably the most inspirational and easy to read magazine I've had the pleasure of receiving.

I'd also like to put the word out to Earth Gardeners living in our great city of Melbourne who are looking for an alternative place to live. I am part of a new community (called "Tsunami"). We are looking for new members to join us and move into our new home — a warehouse with land in the inner suburbs of Melbourne.

Our aims are to develop a community practicing consensus and nonviolence and using urban permaculture principles. The next step towards these aims is to find and lease a warehouse, move in and fit it out with bedrooms, community hall, meeting spaces, working spaces, kitchens and amenities.

We currently have a strong team working towards this but need more people to move in and share the building process. We are expecting to have enough space for up to 12 people.

We are only interested in people with a commitment to community, consensus decision making and interpersonal nonviolence. Please leave a message at (03) 9517 5580 or <cackles52@hotmail.com> if this sounds like the place for them.

Thanks again,

Carolyn Shurey

Rural life

Dear Fellow Earth Gardeners,

My husband, three young children and I recently realised our dream of purchasing our mudbrick home on a bush block in Kangaroo Ground, Victoria. Although we're not really earth gardeners yet because we've spent the last 10 years building up a business which has taken all our time (along with the business of having children!), we hope to now be able to put some of our passions and ideas into practice on our property.

As a start, thank you for the books you sent me recently, which I devoured the vegie patch is already underway! I could write a book about all my future plans and dreams for sustainable living, but instead I'll quote a poem I discovered recently which had an enormous effect on me.

Solitude

Happy the man, whose wish and care
A few paternal acres bound,
Content to breathe his native air
In his own ground.

Whose herds with milk, whose fields with bread,
Whose flocks supply him with attire;
Whose trees in summer yield him shade,
In winter, fire.

Blest, who can unconcernedly find
Hours, days, and years slide soft away
In health of body, peace of mind;
Quiet by day.

Sound sleep by night; study and ease
Together mixed, sweet recreation,
And innocence, which most does please
With meditation.

Thus let me live, unseen, unknown;
Thus unlamented let me die,
Steal from the world, and not a stone
Tell where I lie.

Alexander Pope (1688-1744)

Alexander Pope lived outside London and he had a curvature of the spine that limited his height to four feet, six inches, and a tubercular infection. These afflictions caused severe headaches throughout his life, and caused him to prefer solitude and nature to crowds and noise.

In this 20th Century of individually-wrapped cheese slices, petrol-powered leaf blowers and the constant media diet of the lives of celebrities and "stars", I find Alexander Pope's words to be truly inspirational. Not only in his recipe for healthy, sustainable living, recreation and meditation, but also in the idea that achievement and fame is possibly not the highest goal to which we should aspire. For me, a very liberating thought.

Jennie Fickline
email <info@driveskill.com.au>.

National Biodiversity Month

Dear Earth Garden,

Earth Alive! National Biodiversity Month, September 1999. The ongoing decline of Australia's species and ecosystems is probably our biggest environmental problem, but few people even know what biodiversity means.

Help us turn this around, and promote what your community is doing to conserve our rich natural heritage. For a National Biodiversity Month information kit, that includes an order form for free promotional and educational materials, contact the Community Biodiversity Network on (02) 9380 7629, Email <cbn@wr.com.au> or check out our web site at <www.cbn.org.au>.

Xuela Sledge, Community Biodiversity Network.

Getting caught in a website

Dear Earth Garden,

My partner, Ian, and I have just been perusing (don't you just love that word) your website and favourite links. Although we've already read most of the "stuff", as we subscribe, Jackie's article really hit home — again. The internet is still quite a novelty for us and we are just amazed at the amount of information there is available, it's rather overwhelming! It tends to take one away from reality and the type of personal interaction that Jackie refers to. The trick is, I think, like a lot of other inventions by humankind, to remember that it's a tool and not to get hooked — you don't HAVE to click on that hyperlink!

This is just a quick note to let you know how important your magazine is to us. Ian, being the household chef and an exceptional one at that (I have to say that because he's reading this over my shoulder) loves Gary's recipes and stories.

We both hang out for the magazine and read it cover to cover in a matter of days, hours if we have enough spare time. It helps keep us sane, well sort of! Sanity, after all, is relative! Scary isn't it? Anyway, three cheers for a wonderful magazine and Website, keep up the good work.

Best Wishes,

Helen Barrett and Ian Gilmore.

Dealing with tiger snakes

Dear Earth Garden,

While we have responded to F. Jonker directly, we would like to draw everyone's attention to groups that would be able to help answer questions about tiger snakes. Having lived for some time in and near Canberra, we were members of both Wildcare Queanbeyan Inc. <http://www.effect.net.au/wildcare/> and (02) 6299 1966) and the ACT Wildlife Foundation, (02) 6296 3114. These are volunteer groups who like NSW's WIRES organisation (1800 641188), provide information, rescue, rehabilitation and release services free to anyone who calls.

For anyone interested in researching these often misunderstood reptiles, we suggest either Wilson and Knowles' *Reptiles of Australia II* cd-rom by Natural Learning or Webster Publishing's *Australian Reptiles* cd-rom. Both of these are excellent disks. We do not use the term misunderstood lightly, as Ian attended a Reptile Handling Course run by WIRES about 18 months ago. While being deathly (perhaps not the best word) afraid of snakes, it opened his eyes to how they live and what they do. Anyone interested should contact WIRES or their local rescue groups and enquire about these courses as they are well worth the effort. We each have our part to play, and ours is animal rescue and land rehabilitation.

Kim and Ian Stanley-Eyles.

Ginger beer and beer recipes?

G'day all,

I have been reading *Earth Garden* for a number of years now, and have been preaching the faith to all who'll listen. Even some that won't.

Recently we built a small house on a west-facing clay block, which cooks under the summer sun. But we have a great view, and some of the most breathtaking sunsets. We have planted over 70 trees on our quarter-acre block, and now they are growing well. Neighbours have commented about our bush block and shortly our house will be hidden. All thanks to the information given through *Earth Garden*.

I would like to ask if anyone has a home brew recipe for ginger beer. The commercial ones are full of artificial preservatives, flavours and colouring. The plan would be to use organic ingredients and nothing artificial. Also the same for a normal beer recipe, if any one has one they could send. Thanks for any help you can supply, Yours in compost,

Shane Burns, 5 Scottlynd Street, Coolum, 4573, Qld.

Forest-friendly office paper and canned wildlife toys

On your next visit to Australia Post, you may notice that there are piles of Reflex Paper scattered around. It seems strange to me that an Australian-owned company would so openly promote such a product to the Australian community. With so much of Australia's forest destroyed it is imperative that we stop logging more native forest!

There are so many alternative papers that are environmentally friendly. If you would like a list of alternative papers, you can contact Environment Victoria on (03) 9348 9044 and they can send you their *Buyer's Guide to Alternative Office Papers* by mail. The guide gives several alternatives with the suppliers' contact details.

I recently convinced the company I work for to stop using Reflex Paper. We

now use Data Copy (from Danka). If we all make an effort to stop using Reflex paper perhaps Amcor will be forced to consider producing paper from genuine recycled and/or plantation pulps.

Another thing you might see in your next visit to Australia Post is 'Aussie Canned Animals'. I saw them at the Melbourne Central Post Office on Swanston Street and they sell for $9.95. It looks like a can of food, but inside is a fluffy toy of a wombat, platypus, echidna, or possum, for example. There is even a label in bright red on the can stating: "Export Quality".

Who needs a canned wombat fluffy toy? It promotes our native wildlife as a consumable commodity. Australian wildlife deserves better then this. Our native wildlife is not a resource to be harvested and exploited. I wrote to Australia Post, Retail Business Unit Manager, GPO Box 2020S, Melbourne, Vic, 3001, to ask that they remove the 'Aussie Canned Animals' from the shelves. You may want to join me in writing a letter and perhaps together we can help people to appreciate our wildlife for its intrinsic value.

Peace to all of you.

Brigitte Charron, Moonee Ponds, Vic, 3039.

Growing a garden that benefits many

Dear Earth Garden,

We are writing this letter in hope that what we've done will inspire others. Nakita Davies, Jodie Hayward and Joanne Ball have started an organic garden for the residents of Bayside Adolescents' Boarding Incorporated (B.A.B.I.). B.A.B.I. was formed in May 1983 as a community response to the needs of teenagers from the Wynnum/Manly districts, who were unable to live at home.

We are all year 12 students at Moreton Institute of Tafe and through one of our subjects we have elected to build a garden. So not only will we be working towards our Senior Certificate but we'll be helping other students of our age become more self-sufficient.

We hope that garden will provide the residents of B.A.B.I. with fresh produce and hopefully gain their interest in self-sufficiency. EG, with your help maybe together we can achieve a sustainable and self sufficient future.

Thank you,

N. Davies, J. Hayward and J. Ball, Wynnum Manly, QLD.

Composting human manure

Dear Earth Garden

It's great to read something positive about composting with human manure (EG 105). Other, wiser cultures have been using it for centuries. My partner's grandad used to dig it straight into his vegie garden in the 1960s then leave that bit for a while to break down. Apparently he always had the best vegies. We empty ours into a wheelie bin (you can also put vegie scraps in there); when the bin is full we leave it for 45 to 60 days to kill any pathogens. It's ready when it resembles rich, brown, crumbly soil — just like 'normal' compost.

We're vegans and don't keep animals, so it's invaluable, along with homemade comfrey fertiliser. Why do Westerners have such a fear of their own waste? It belongs back in the Earth. Instead, we waste precious water on flushing toilets, treat it with chemicals and pump it out to sea, where it poisons and pollutes every living thing.

I truly hope all new *Earth Gardeners* will think twice before getting a flush toilet. Thanks again for finally mentioning this important subject. PS: My partner insists his doesn't smell!

Sienna Blake, Lismore, NSW.

How do you garden in the North-West?

Dear EG readers,

I need some help from all in the area of Port Hedland. Having recently moved here from Perth, and having previously lived in South Gippsland, Victoria, I need some new gardening skills.

In this dry hot environment, I've just been told by my neighbour with the flourishing garden, that it's too late to start a vegie garden now! I'm sure he thought I was a Dodo the way I looked at him in disbelief. Apparently the temperatures in summer average in the 40° Celsius range, so what can survive but the racehorse goannas, ticks, midgies (b!@&**! itching things) and the ants? Oh that's right, I can grow bananas and paw paws! But what else? My trusty neighbour also said that if I want to mulch the leaves in my garden I'll need to add lime.

Are there any other natural alternatives? Perhaps there's a book someone can suggest (I could buy 100 books before I find the right one).

The other aspect I have to face is that time is of the essence. There's the kids, work, being pregnant and going fishing with my husband — and they take priority! At least we might have some fish emulsion if the dog doesn't eat it! As we don't own the property, we don't want to spend a lot of money, but I'm sure I'm going to need more energy than money.

So, any ideas on what to grow, how to grow it, pest control, would be much appreciated. I also saw a fellow on 'Gardening Australia' who had created an organic type mango farm in Kununurra. He showed it can be done in a fairly harsh and barren environment.

Thanks for this chance to stay in touch with the Earth, there's nothing more grounding than to cultivate something form scratch, a bit like making babies for women and creating a successful business for a man perhaps? We can't all do that, but we can grow a garden.

Keep smiling.

Andrea Rasmussen, 2 Pilkington Street, Port Hedland, 6721,WA.

A cost analysis of owner building would help

Dear EG,

I look forward to EG's arrival so I can devour it and dream a little more of becoming self-sufficient. I am always tantalised by the 'Landlines' section and hope that I may have my own little piece of paradise one day. At the moment, I am having to concentrate on bringing up my four children in the suburbs but I dream of the day I can move out of the rat race.

I am inspired by your readers efforts, but at the moment I have little capital behind me to finance my escape. I would be grateful if you could do a cost comparison on the various ways of building a dwelling because money is my biggest hindrance. I am fit, 30-something and a hard worker. If anyone would like to offer their pearls of wisdom feel free to write. I am also interested in community living — the ads never seem to say how much it costs to 'join', that may be a cheap option too? PS: does anyone know where I can study herbalism in, or from, the ACT?

Tracey, PO Box 672, Belconnen, ACT. 2616.

Moving to a cooler climate

Dear Earth Garden Readers,

We are a family of three (soon to be four), living in suburban Perth and planning to move on in a couple of years. After living most of our lives in this climate of lovely winters but too-hot and dry summers, we would like to try somewhere with more comfortable summer weather. The south coast of W.A., south-coast of Victoria and north-west corner of Tasmania are all possi-

bilities. Ideally, we would be looking for one to ten acres, with a house to live in while we design and build our passive-solar, strawbale home.

We would love to hear from any readers in these areas, who can share information and opinions on their climate and rainfall, soil and growing conditions, community feel, land prices, job opportunities, shire regulations and attitudes, and that sort of thing. I Thank you for a wonderful magazine. Best wishes to all.

Janet Portman, 16 Wilson Street, Bassendean, WA, 6054.

Free work for knowledge

Dear Earth Garden,

I need help at spreading the word that I'm a 23-year -old who longs to build a mudbrick house, and is willing to travel to anyone's property in Victoria. I am also interested in permaculture and taking care of the planet. I have completed a starting point course at Cockatoo (great course) but wish to gain as much knowledge as possible and make new friends, so please if your building or gardening in the alternative way and would like some free labour I'd love to hear from you.

Duane Thomas, 10 Royston Street, Meeniyan, Vic, 3956.

If we all do our little bit

Dear Earth Gardeners,

Thank you to all who contribute to this wonderful journal of life. Editors, writers and correspondents put so much of themselves into this magazine, and must know how much it is appreciated. Every time the magazine arrives, it gives another dose of encouragement, and we can keep on doing our little bit to make life better and care for our planet. We do our 'little bit', and maybe one day, all the 'little bits' will add up to make a great deal of good.

We have planted lots of fruit trees which should do well in our area, stone fruits, apples, pears and others, and lots of berries too. The vegie garden struggles along, although the brassicas did exceptionally well over the winter, with no nasty green grubs to pick off the broccoli before cooking. The silver beet planted last spring are still producing and there are some seedlings growing underneath them too. The peas are getting nipped off before they can put out leaves, but I haven't seen the culprits. I'm looking forward to trying some heritage varieties of tomatoes this summer.

Ray and Debbie Fisher.

In need of a break

Dear Earth Garden,

Over the last 12 months, my fiance and I have delved and searched deep into purchasing a home, sited on 10 or more acres, to no avail! Regardless of having excellent rental references, banks will not deal with us, nor does anyone seem to want to settle on vendor or rent/buy purchase. Cold hard cash is what sellers want only!

We are prepared for a lot of hard labour in achieving our ultimate goal in life; to escape this grime/smog ridden society of high stress and high costs of living to match. I almost cry when parting with the $180.00 per week rent money in order to have a roof that keeps off the rain, we'd much rather see this sum spent wisely. All we need is the opportunity to start afresh. Does anyone selling have anything to offer us?

Mandy Spacek, 8 Berith Street, Umina Beach, NSW, 2257.

Invitation to Beelarong City Farm

Dear EG,

I would like to invite fellow Brisbanites to come along and join us at Beelarong City Farm in Morningside. We have been established for just over 12 months now and are looking for more willing participants to help expand the gardens and establish a food forest. We meet as a group each Sunday at 2 pm and Wednesdays at 11 am. People that are interested or would like to know more can contact me.

Marc King, (07) 3899 8214, 42 Gillan Street, Norman Park, QLD, 4170.

Natural Pet Care

Dear Earth Garden,

I have lived in Kuranda, north Queensland, for nearly six years. Because of the tick problem I have religiously dipped our two small dogs. Over the years the male dog (a silky terrier called Rex) progressively got more lethargic. He would not go for walks or virtually move from where he slept. I took this to be part of getting older as he is now nine years of age.

But a few weeks ago he was scratching and carrying on, so I decided to change his dip to a natural one with pyrethum. I have been reluctant before, believing them to not be as effective.

Now the change in Rex is astronomical, he bounds out the door and is halfway down the drive before we can catch up with him. I only have to look like I am going somewhere and he is after me. He is a new dog in every way and the only thing I have changed is his dip. If this situation happens with animals, what about chronic fatigue in people. It certainly bears thinking about.

Jan Coulter, Kuranda, QLD.

What do you do with cow horns?

Dear Earth Garden Readers,

Do any Earth Gardeners out there know the correct method of making organic fertiliser using cow manure stuffed into cow horns and buried for a certain time? I managed to buy four large horns at a junk shop and I am keen to make them useful once again. PS: We live in a rammed earth home, have a composting toilet and grey-water reed bed system, grow our own trees and organic vegies, and would like to hear from any like-minded people in our neck of the woods (Palmer is near Mannum, S.A).

Alan Foster, C/o P.O Palmer, 5237, SA.

Crossing a white and brown goose

Dear Editor,

I am wondering if any of your readers breed White Chinese Geese and has anyone crossed the white with a brown with what sort of a result? I have the 'normal' goose but find the Chinese are really elegant and have quite a different personality from the 'normal' goose.

I would love to hear from anyone interested in Chinese geese — perhaps a Gaggle Club could be formed. Your magazine is a real treat and I nearly always find a hint or gain knowledge in every edition.

H. Allison, Meredith, Vic.

It's great on a bush block

Dear Alan,

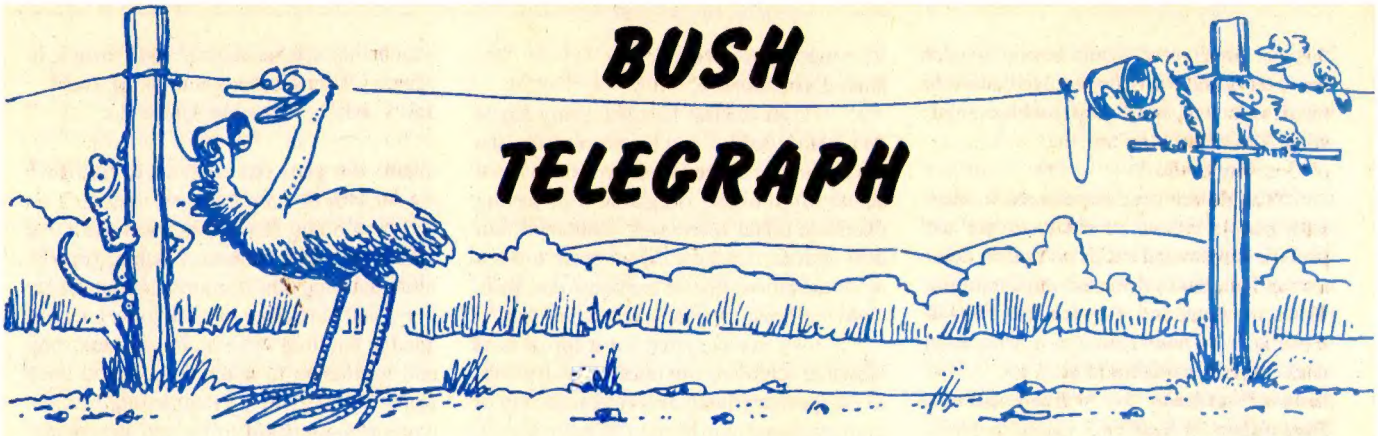
Thanks for a great mag. We have finally made the break from suburban Melbourne to our bush block at Bright. We are building with old timbers and our own mudbricks. We have planted 3000 lavender bushes and have another 2000 to go in any time, it's a great feeling.

If anybody is interested to see what's happening we are at Roberts Creek Road, Porepunkah. Our postal address is PO Box 406, Bright, 3741.

We have read with interest over the years of people changing their lifestyles and the experiences and tips they give. Also we enjoy Jackie French's writings. Now we feel we are a part of it all too. All the best. Regards,

Ted and Dora Gray, Bright, Vic.

• *Earth People Write* continues on page 74



BUSH TELEGRAPH

Any news items which may interest Earth Gardeners may be submitted to *Bush Telegraph*. Please send notice of meetings, festivals and gatherings well in advance of the events.

Victorian Wilderness Saved

Victoria's last unprotected wilderness area in the hills below Mount Hotham may be saved from logging. The pristine Wongungarra River and its surrounding alpine ash forests, left untouched by European settlement, have been added to a new draft of Victoria's forest reserves under the North-East Regional Forest Agreement. So Wongungarra wilderness's most famous inhabitant, the critically-endangered spotted tree frog, may soon breathe more easily. Wilderness Society spokesperson, Richard Hughes, said Wongungarra was "the jewel in the crown of the expanded reserve system" proposed in the draft forest agreement.

"The Commonwealth and Victorian governments are to be congratulated for recognising the most valuable areas in the Wongungarra wilderness," Mr Hughes said. The Wongungarra valley, about five km south of Mount Hotham, plunges about 800 metres through mountain and alpine ash forests into the clear streams of the Wongungarra River. The river catchment is home to the spotted tree frog, while the surrounding steep slopes provide food and lodging for the peregrine falcon and the smoky mouse.

Jabiluka Champions Win 'Green Nobel' Prize

This year's Goldman Environment Prize has been awarded to Yvonne Margarula and Jacqui Katona, leaders of the Mirrar Aboriginal people's fight to stop the Jabiluka uranium mine. Six Prizes are awarded annually throughout the world — one in each continent, plus one for Australia and the world's island nations. The Goldman Environment Prize is like a Nobel Prize for environmentalists and each Prize is worth A$195,000. There will also be valuable international publicity for the campaign to stop Jabiluka, including coverage in *Time* magazine.

Mirrar leader, Yvonne Margarula, and spokesperson, Jacqui Katona, have led the campaign to halt the mine, and made the issue a household cause in Australia. The campaign to halt Jabiluka is assuming international proportions with the Goldman Prize, plus the focus switching to Paris when in July, the World Heritage Bureau will vote on whether or not to list Kakadu as a World Heritage property 'in danger' because of the Jabiluka mine.

Australian Greens senator for Tasmania, Dr Bob Brown, who led the fight to save the Franklin River, was the inaugural winner of the Goldman Prize in 1990.

"Yvonne and Jacqui have shown great courage, tenacity and commitment to their land and people against an arrogant and heartless government and the mining giant," said Senator Brown, in a statement applauding the win.

Everest Cleared Of Empties

An Austrian environmental group has cleared 56,000 empty beer bottles from the lower slopes of Mount Everest in a campaign to clean up the world's highest mountain, Nepal's Tourism Ministry said. An official said there were still 50 tonnes of garbage on Everest.

It's On Again — Going Solar's Fair, November '99

Melbourne solar retailer, Going Solar, is organising the return of its Renewable Energy & Sustainable Living Fair. The 1999 Fair will be held at the Hanging Rock Reserve in central Victoria on 27 and 28 November, following the outstanding success of last year's event. An important factor in holding the Fair in November, according to staff member, Liz Andrews, is the opportunity to counter the "Pre-Millennium Mania" with some positive solutions.

This year's Fair is likely to include a Trade Day on the Friday, tours of local energy-efficient buildings, a greater range of exhibitors, bigger seminar tents, and more food vendors.

"The Fair offers people the opportunity to find out about accessible and sustainable options for power, sewerage and water conservation and other basic household requirements," says Liz. You can call Going Solar on (03) 9328 4123 or more details.

Worm Farm Manager Needed

Gateway CAS is a community access service for adults with an intellectual disability. Its aim is to encourage independence by providing support and training in living and work skills. Their worm farm has been successful in providing useful work and a small income to a group of people with limited options.

"We have a keen work force with staff support, the space and a regular food supply to further develop a worthwhile little enterprise. We are based in the Northern Beaches area of Sydney and need someone to help

this program grow. Our service is open week days and the time involved could be from two hours per week up to whatever you wish," says Paul Moulton, the Co-ordinator of Gateway CAS.

"You do not need experience working with people with a disability as we will provide support and training. Your enthusiasm and interest in nature is more important. There are a number of options for involvement and we would love to discuss them with someone who could get a lot of satisfaction from being involved with us," says Paul. Contact Paul at 3 Chandos Street, Manly Vale, NSW, 2093; phone or fax: (02) 9949 8627.

Pay Tel Australia phone — Not Telstra

At the Going Solar Renewable Energy Fair in November 1998 Pay Tel Australia worked with K & C Stork Solar Consultants to create Australia's first solar-powered cellular payphone. This product is an extension of their present payphone network which reaches from Cairns to Bunbury and most places in between. To promote alternative energy and discover new markets Pay Tel Australia were approached by K & C Stork Solar Consultants to set up this service at Musk. Chris Stork manufactured the stand, booth and all interface work and Pay Tel provided the credit card/phonecard cellular payphone. Chris Stork also created the opportunity for patrons to use this service by making phonecards available at the fair. Telstra was in no way associated with this project as *Earth Garden* mistakenly wrote.

"K & C Stork Solar Consultants and Pay Tel Australia deserve the appropriate accolades for their creative efforts to make a better environment for all," said *Earth Garden* editor, Alan T Gray.

Denmark Removes Coal-Based Power

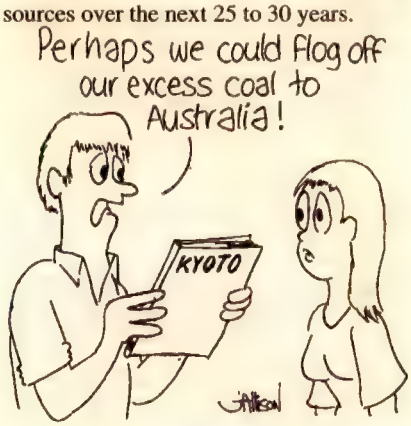
Denmark, seeking to slash Greenhouse gas emissions and accelerate more renewable energy production, is stepping up its effort to phase out inefficient coal-fired power plants. Elsam group, the largest producer of electricity in Denmark, will officially remove four of its coal-based power units from production on 1 July, said Bjarne Korshoej, head of power production at Elsam.

"We have decided that all the old coal-fired power plants of around 200 megawatts will be closed. From 1 July, the electricity system cannot demand to use them," he said. Elsam group consists of Elsam and six power companies in Jutland-Funen, west Denmark.

Korshoej said some of Elsam's older 100-megawatt coal-based units have been out of commission following 30 years of use. He said, however, the company recently decided to keep the units out of production unless needed in emergencies to supply heating to major cities. "Now, we have a lot of capacity, and we actually want to stop them," he said. The four coal-based units and one oil-based unit slated to be removed from production totalled around 1,300 megawatts. Korshoej said part of Elsam's decision was motivated by Denmark's commitment to reduce Greenhouse gas emissions.

Coal, considered a large contributor to Greenhouse gases, represented around 64 percent of Denmark's total electricity production in 1997, according to the Danish Energy Agency. In 1998 the country reduced its use of coal for electricity production by nine percent, it said. Denmark plans to reduce its average emissions of Greenhouse gases between 2008 and 2012 by 21 percent in relation to the 1990 level. In accordance with the Kyoto pact industrialised countries must have made demonstrable progress towards fulfilling their reduction commitments by 2005. Except for Australia — which successfully argued for an eight percent *increase* over the same period.

A domestic plan called "Energy 21", drafted in 1996, called for Danish power and heating companies to replace virtually all coal with natural gas or renewable energy sources over the next 25 to 30 years.



Largest Eco-Friendly Homes Tour

The country's biggest collection of eco-friendly homes will be open to the public on 13 and 14 June as part of the 1999 Non-Conventional Homes Eco-Tour. Some 19 privately-owned homes and other venues, located around Taree on the Mid-North Coast of New South Wales (three and a half hour's drive from Sydney), make up this year's Tour.

The two-day self-drive tour features mudbrick, rammed earth and other eco-friendly homes, plus galleries and restaurants that have ecologically-sustainable themes or ideas. Many of the homes also maintain organic gardens and farms. Tour spokesperson, John Irving, said that the Tour has become the best of its kind over the past seven years and bookings for accommodation in the region were already pouring in.

"There are too few opportunities for people to inspect such outstanding eco-friendly designs and actually talk to people who created them," said Mr Irving. "When we started the tour in 1992 we had no idea there would be such an appetite for this kind of first-hand information. Visitors can select those that most interest them and get a really good look at what's involved. The guide book has enough detail for people to preplan their tour," he said.

The 1999 Non Conventional Homes Eco-Tour coincides with Taree's annual Envirofair, which will be held on Saturday 12 June. Both events attract around 10,000 visitors. The Non Conventional Home Eco-Tour costs just $20 per car and includes a guide book that outlines the tour, the homes and maps. Tour books are available by mail from Manning River Steiner School, 316 Wingham Road, Taree, NSW, 2430. Phone: (02) 6551 3403. $22 includes return postage and handling. The books can also be purchased from the Tourist Information Centres at Taree, Kew and Forster, as well as at the Envirofair. All funds raised through this event assist the community-based Manning River Steiner School.

Groups Quit US Pesticide Panel Over Child Safety

Six consumer groups recently quit a White House pesticide review panel, saying chemical and farm interests were blocking attempts to protect young children from suspected cancer-causing insecticides used on peaches, apples and other foods. The departure of the World Wildlife Fund, Natural Resources Defence Council, Consumers Union and four other activist groups came after months of growing frustration with the slow pace of the 50-member advisory panel. At issue is how the Environmental Protection Agency decides which pesticides in food, drinking water, playgrounds, lawns and homes pose a health threat to young children.

The consumer groups criticised the EPA for not banning methyl parathion and other chemicals linked to cancer. Methyl parathion is widely used on peaches, apples, pears, grapes and other diet staples of young

children. The Consumers' Union, using US Agriculture Department data, recently calculated that two out of five young children eat an unsafe amount of methyl parathion residue from peaches alone. Ned Groth, a food safety scientist for the Consumers Union, said, "The panel is a consensus process that takes forever and is an invitation to endless debate. The agency needs to make hard decisions based on the available data and go forward".

As a precaution, parents should peel fruits and vegetables before giving them to pre-school children, or buy organically-grown produce, Groth said. A sweeping 1996 law ordered the EPA to evaluate 3,000 US-registered pesticides by August 1999 to assess the safety risk for children. The law requires the agency to require an extra ten-fold safety margin for children. The activist groups said they would sue the EPA in August if the agency failed to meet deadlines imposed by Congress.

"To have these groups resign is not in the public's best interest," said Jay Vroom, President of the American Crop Protection Association, a trade group representing pesticide makers. "Are they for sound science that protects kids or political grandstanding that grabs headlines?" ***— Reuters***

BP And Solarex Form World's Biggest Solar Company

On 6 April 1999 BP Amoco announced that it is to buy the 50 per cent stake it did not already own in Solarex, one of the world's leading solar companies in the US, for US$45 million. The buyout of what was previously a 50:50 joint venture between Amoco and Enron will create the largest solar company in the world. The integrated company will be called BP Solarex and will build on the current business activities of Solarex and BP Solar.

It will have annual revenues of more than US$150 million, representing a 20 per cent share of the global market. The new company will have manufacturing operations in four countries — the USA, Spain, Australia and India, producing around 30 megawatts of solar products each year. BP Solarex is aiming for prime positions in leading-edge solar technology, most notably the new generation of thin films, as well as claiming to offer "the world's broadest product range in crystalline silicon".

BP Amoco Chief Executive, Sir John Browne, said: "BP Amoco already has a strong track record in solar, with leadership technology in key areas. This acquisition is another significant step towards our target of building a $1 billion solar business over the next decade".

Solarex in Australia told *Earth Garden* that details of the merger with BP Solar were still to be finalised, but that all staff were excited about the prospects for further promotion of the solar industry in Australia.

Get Hens Out Of Cages

RSPCA National President, Dr Hugh Wirth, recently launched the RSPCA's intensive farming campaign calling on all Australians to *Think Before You Choose Your Eggs.* Ten and a half million hens are confined to tiny battery cages day and night, on average, for more than a year to produce the majority of Australia's 215 million dozen eggs and the RSPCA says we should get them out of cages into more humane conditions. Dr Wirth said battery hens are kept in tiny cages with only the average space of less than an A4 piece of paper to stand up in.

"The battery cage system causes great frustration to the hens because they cannot perform their normal behaviours. The hen cannot stand properly, preen feathers, stretch out, flap wings, lay in nests, perch, dust bathe, socialise and may have difficulty turning around".

"Battery cages can also cause serious damage to the feet and claws from the mesh floor and lack of perches. In addition, skeletal and muscle weakness can be caused by restricted movement and lack of exercise," Dr Wirth said.

"Eggs can be humanely-produced commercially and the RSPCA asks the Australian public to support alternative systems of egg production for the sake of all layer hens. It is simply up to the Australian public to care enough about the suffering of battery hens to insist on humane egg production". Readers can help the RSPCA to get hens out of cages by writing to your State Minister for Agriculture. Campaign postcards are available from RSPCA Centres in each State.

Wind Power Sweeps Forwards

Global wind power capacity will more than triple over the five years to 2003, Danish wind energy consultancy BTM Consult ApS forecast recently. Installed capacity was just 10,000 megawatts at the end of 1998, but it is expected to soar to 21,000 megawatts by 2003. The consultancy said there were far-reaching plans for big offshore wind farms and that Europe would remain the main growth region for wind farm sales. "The sales value of coming . . . wind power installations amounts to some $20 billion." Danish wind turbine manufacturers, led by Vestas and NEGMicon, saw their global market share of new installations fall to 48 percent in 1998 from 59 percent in 1997, BTM said. Including associated companies abroad, the Danish world market share remained over 50 percent, it said. NEG Micon expects a 35 to 40 percent growth in sales this year. Vestas projects a 30 to 35 percent increase in 1999 turnover from last year. The Danes' main competitors in Europe are German and Spanish companies and in the US, Enron Wind Corporation is the leading company.

GM Fears Boost Organic Produce

Concerns over the safety and potential ubiquity of genetically-modified (GM) foods are driving British consumers increasingly into the arms of organic producers. And the supporters of organic methods have been quick to push organic food as the only surefire way of avoiding transgenic material in food. "There's a real choice," said Douglas Parr, a campaigner with the environmental group Greenpeace. "The choice is whether to go down a genetically-modified future or a sustainable organic future. The future belongs to organic farming and less environmentally-damaging patterns of consumption," said Benny Haerlin, Greenpeace International's Netherlands-based Campaign Co-ordinator.

Organic food has soared in popularity in Britain, with sales rising from 100 million pounds ($240 million) in 1993 to 390 million in 1997, according to the Soil Association, which predicted a further 40 percent growth in the next year. Government is eager to promote organic farming, if only for balance of payments reasons. "We want to see more farmers come to organic production. We import 70 percent of organic food," Food Minister, Jeff Rooker, said earlier this year.

Organic status for crops and genetic modification are completely mutually-exclusive, organic campaigners say. As a case

in point the Soil Association cites last year's refusal by environment minister, Michael Meacher, to order the destruction of a crop of GM maize bordering a Soil Association registered organic crop.

"The Soil Association regrettably had to inform the farmer that the organic status of his sweet corn would have to be removed if there was any evidence of contamination from the GM maize. The only way that the government can fulfil its promise to protect organic farmers (and indeed conventional farmers) who wish to provide a GM-free choice for consumers is through a ban on the growing of genetically engineered maize," said Patrick Holden, Soil Association Director. ***— Reuters***

Soybean For Industrial Glue

Professor Susan Sun of Kansas State University, USA, has been working on an experimental project that would make formaldehyde glue something of the past. Until now most composite wood products, including bamboo plywood, have contained high levels of the glue substances made from formaldehyde. Bamboo by-products are especially prone to high content of toxic materials because to 're-manufacture' bamboo into rectangular shapes it must be mechanically stripped and refabricated into compressed units. This heavily industrialised processing reconstructs bamboo into a durable flooring and pressboard products which have been exported from mainland China, India and recently Vietnam. All the current water-resistant products using laminated bamboo have some formaldehyde in them and these chemicals are not environmentally friendly. From the time the ingredients are mixed the process is prone to dangerous noxious by-products which continue off gassing for years and even pose threats when burned or buried.

The Kansas State University Chemistry department has been looking into ways to unstick formaldehyde's dominance of industrial adhesives. Dr Sun's work with common soy beans has opened that possibility for the first time. A soy protein-based glue has been developed that successfully stood up to industrial testing for water resistance. She said that her batch of glues using a modified form of soy protein held plywood together better than any other formula of formaldehyde alternative.

This could mean that small scale industrial applications could potentially be managed at the village level, taking bamboo one more step toward a role as truly 'environmentally friendly'.

This item comes from the Australian Bamboo Society News. Since its inauguration in 1998 the society has grown to about 125 members and is growing at a rate of 5 to 10 per week. The ABS has established a Website at <www.bamboo.org.au/> which contains the aims of the society, contact details, and a membership application form.

Powercor and YHA Team Up

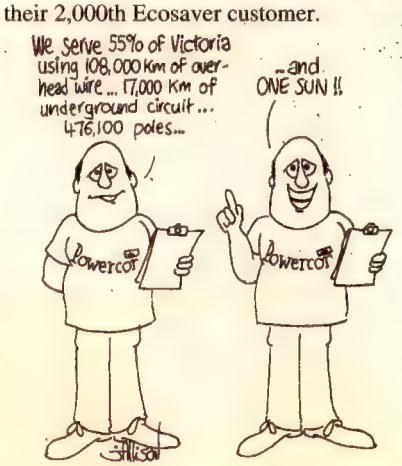
Victoria's largest electricity distributor, Powercor Australia, and the Youth Hostels Association of Victoria, announced in March plans for a grid-interactive solar electricity system to be installed at YHA's new environmentally sustainable hostel, construction of which is about to commence at Halls Gap in the Grampians National Park.

Powercor will be the major sponsor of the solar electricity system, which will see solar electricity generated at the site to power the hostel, with excess fed into the electricity grid for Powercor's customers. The excess energy created at the hostel will be fed back into Powercor's system as part of their Ecosaver program, which is funded from customers who opt to pay 20 percent extra to support renewable energy sources.

YHA Chief Executive Officer, Shelley Lavender, said the new hostel would be a great draw card for tourists to the area. "It will be built on the site of our present hostel and will provide more room for guests along with fantastic facilities and the chance to see how a 'Sustainable Living Centre' operates in practice."

"It will encourage tourists and help educate about the benefits of solar power, energy efficient design and recycling. We hope they will return home with many great ideas".

The Eco-hostel's solar electrical system is expected to have a peak generating capacity of seven kilowatts of electricity and will open in 2000. In March Powercor signed their 2,000th Ecosaver customer.



Solar Award For Qld Builder

The building industry should take more responsibility for the environment and seek out ways to reduce Greenhouse gas emissions, according to Queensland home builder, Lev Mizikovsky. Mr Mizikovsky has won a national award from Solahart Industries acknowledging his commitment to using solar energy in homes built by his company, Tamawood Homes. Solahart recently presented Mr Mizikovsky with its Most Valued Customer Award in recognition of his status as Solahart's largest individual customer. Solahart hot water systems are a standard feature of Tamawood homes.

Mr Mizikovsky said home buyers appreciated both the economic and environmental benefits of the policy. "People feel good that they can do something about the environment and having a solar hot water system is an easy way for them to make a significant difference," he said.

Mr Mizikovsky said the building industry had a responsibility to find ways to make a contribution to the world's environmental health. "There are 2,500 Solahart systems on homes sold by Tamawood over recent years. If you add up their combined impact on Greenhouse gas levels, we've probably done more for the environment than most politicians," he said.

—SEIAA Newsletter

Earth Garden At Winter Shows

The South Coast Field Day at the Candelo Showgrounds in the Bega Valley, southern NSW, is one of three field days *Earth Garden* will be attending in the next few months. The South Coast event has been built into a popular and informative weekend, with interesting speakers, farm tours, farm forestry information and more than 200 exhibits. For more details phone (02) 6492 7306, or (02) 6494 2014.

Earth Garden will also have a stall at the highly-popular Weekly Times Country Living Show at the Caulfield Racecourse in Melbourne. The event will be held from 9 to 11 July — see the advertisement in this issue. The event's friendly organisers, led by Simon Monk, will produce yet another entertaining and instructive weekend.

The Farming The Future Expo at Cooroy near Noosa in Queensland is another event we enjoy attending. It's a great chance to catch up with subscribers and new readers, and to enjoy a little Sunshine Coast hinterland sunlight. Phone the organisers on (07) 5474 8230 for more details about this year's event, which is on from 30 July to 1 August.

It Does Pay (Eventually) NOT To Spray

Produce from Fiona and Nicholas Chambers' farm is exported to Japan and is available from Brisbane to Perth.

Fiona Chambers with a Wessex Saddleback piglet.

by Anne Hall
Castlemaine, Victoria.

THE decision to grow vegetables organically didn't come cheaply for Fiona and Nicholas Chambers. They had just returned from the 1994 IFOAM (International Federation of Agricultural Movements) conference in New Zealand.

"It was a real turning point," said Fiona. "We saw the big picture, saw the ideology. Even though we had been growing crops organically for five years, the conference really helped to reinforce our commitment."

"When we got back," said Nicholas, "I went straight up to the paddock to check the crops, it was our second export crop. The carrot crop had looked fantastic when we left six days earlier, but a plague of Bogong moth caterpillars had moved in and was destroying the crop. We were devastated.

"We knew that it would have a huge impact on our market, our business and our future. We had to make a decision about how to deal with the situation. The decision not to spray with conventional sprays cost us around $300,000 that year, but we believed that our future was in growing food organically, and spraying would have jeopardised that future."

The Chambers met while studying at Dookie Agricultural College near Benalla, in Victoria. Fiona has a Diploma of Applied Science in Agriculture and Nicholas a Diploma of Applied Science in Horticulture. They both wanted to farm, and bought their 40 hectare farm near Daylesford in 1988. "We wanted a property with rich soils and reliable rainfall," said Nicholas. Both of them were working full-time off the farm at that time.

Nicholas worked as a fruit and vegetable merchant at the Melbourne wholesale market for seven years. He per-

ceived a growing interest in organic food. "The interest in Australia for organic food is firstly for the health aspect, and secondly the environmental impact," he said. "In Europe, it is the other was around."

Ironically, Fiona was working in the veterinary pharmaceutical industry when they made their decision to convert their farm to organics. "In 1990 we went for a walk up in the paddock," said Fiona. "I remember Nicholas saying he thought there was a demand for organic vegetables and there was room for improvement in the quality. The appearance, variety and the presentation are really important.

"What's good about organic farming is that it embraces the whole cycle. If we used super-phosphate here we would get incredible results. But you have to look at the whole cycle — some things are good in the short-term."

"We decided we could learn what we needed to know. It was the starting point for us growing organically, and it all went from there." Fernleigh Farm was inspected by NASAA and then underwent a three year conversion to become certified organic.

Although it was a commercial decision to be organic farmers they both had personal experience of the negative effects of chemicals. "My grandfather died of a chemical-related illness," said Fiona, "which led me to wonder about the use of chemicals in farming. Another factor was our son Martin's sensitivity to food preservatives. That made us cautious about what we were feeding the family.

"We aren't big advocates of pills and additives," she said. "We believe in fresh wholesome food. I'm also very interested in the idea of food being good medicine."

Nicholas grew up on a farm in Toolangi, Victoria. "It was a conventional carrot and strawberry runner farm. Strawberries require lots of pesticides. I saw land going from virgin soil to full-scale soil fumigation. A lot of those soils became biologically dead — not all of it.

"In our business, quality is first and foremost — being organic is a bonus. We have to be good, we have to be professional. Being organic gives us access to markets. And by being organic we are improving the soil rather than damaging it.

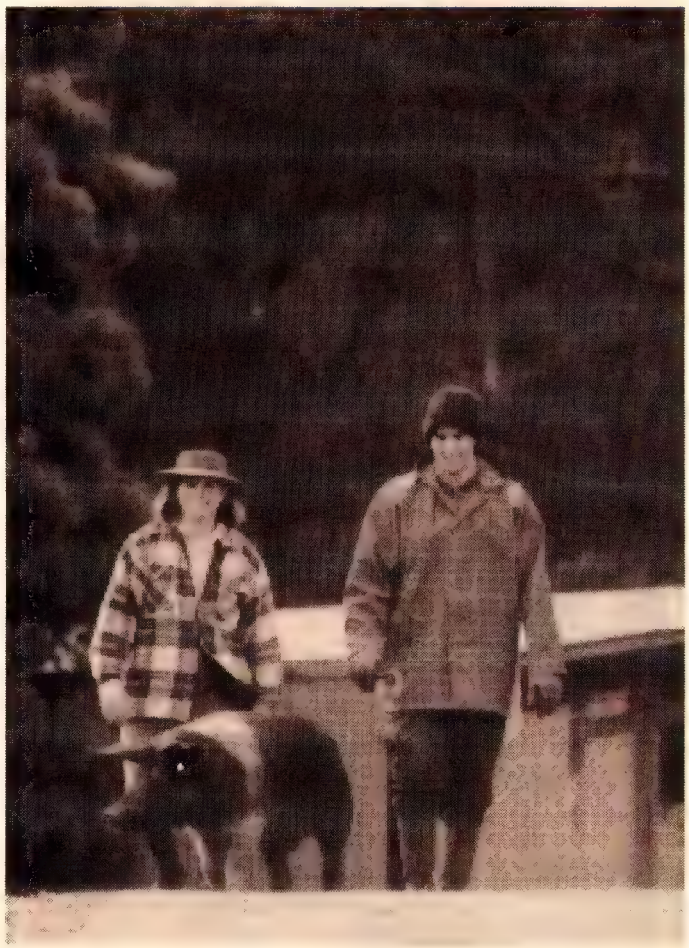
"What's good about organic farming is that it embraces the whole cycle. If we used super-phosphate here we would get incredible results. But you have to look at the whole cycle — some things are good in the short-term," Nicholas said.

In 1992, with two small children, Nicholas left the market and took the plunge to go farming full-time. They had been expanding their carrot and potato operation over the years in order for the farm to be able to support them. "It was a huge leap of faith," recalls Nicholas, "and was certainly not an easy time, but farming was what I wanted to do."

The business grew very quickly, and by 1995 they had just over 20 hectares planted with carrots. "We started selling our carrots to Japan as juice," said Nicholas. "If it is what you really want to do you can carve out a market." That year they won the 1995 Commonwealth Bank Victorian Farm Entrepreneur Encouragement Award.

But then the Japanese economy crashed. "We had a 480 tonne contract in 1995 that went to 60 tonnes in 1996, but we were expecting a 1000 tonne contract," said Nicholas. "We had just lost $300,000 from the

Fiona and Nicholas Chambers at Fernleigh Farm, near Daylesford, Central Victoria.



Bogong moth caterpillars. We had to lay off the four full-time people who were working at Fernleigh Farm, and we very nearly lost the farm. It was a very difficult time!"

"But we believed strongly in ourselves, we believed in farming organically, we believed we were doing a good job, and we fought very hard to keep going," says Fiona. She went back to work, first for the Department of Natural Resources and Environment, and then as a private consultant in the field of business planning. "Planning is very important and so is preparing budgets," says Fiona, "but it takes a huge amount of work."

The business will recover this year from the difficulties of 1995. The Chambers went to Japan last year and brought back a new contract to supply fresh carrots. Japan has a huge number of people who eat at least some organic food — 12 per cent of the population. "That's phenomonal," said Nicholas. "In Australia, it's less than one per cent."

Fernleigh Farm is busy seven days a week, and once again employs four people full-time. And there are ten to12 people working part time in the shed with another 15 people out harvesting.

The Chambers see their ability to employ people as being a way they can contribute to the community. Both completed leadership courses in 1998. Nicholas was one of 32 people throughout Australia to be on the Australian Rural Leadership program. "It enabled me to see myself and our business in perspective, and how it fits into the broader community. If we employ a heap of people we're doing our bit for the community."

Fiona went on the Williamson Community Leadership program — there was only one place for a farmer — and she won it. "Social issues were very big on the program," she said . "It made me realise that we make a significant contribution to society by providing employment. We work hard at building teams; at valuing the contributions of our staff, and of staff participating in the business. And that's sadly lacking in our society."

Nicholas and Fiona have also become interested in free-range pigs and are developing another outlet with organic pork. They have 15 Wessex Saddleback sows, and they are some of the last lines in Australia. The Wessex Saddleback is ideal for free-ranging because it doesn't suffer damage from the sun like paler breeds. When the Chambers became interested in the breed there were less than 30 registered Wessex Saddlebacks left in Australia.

Nicholas recalls: "When we tried to find a pure-bred boar we realised how drastically small the gene pool had become in Australia. We eventually found one of the original importers of the breed in Toowoomba, Queensland. She and her son still had some of their original lines and we have subsequently purchased them and brought them to Victoria. Sadly, Mrs Douglas died last year at the age of 91, but we are doing our best to preserve her life's work for the breed."

"It is really, really important for people to breed them," says Fiona. "With conventional breeding practices there is often one stud animal for thousands of females — that is narrowing the gene pool so much. It is a problem across all breeds of domestic farm livestock. We have already lost a few breeds of pigs in Australia, such as the Middle White and the Gloucester Old Spot, and the numbers of Wessex Saddlebacks, Large Blacks and Tamworths are now critically low."

Nicholas and Fiona want Fernleigh Farm to get bigger. They are expanding the number of pigs in their animal enterprise. They are also developing other vegetable and ley crops to get a better balance in their crop and animal rotations. Each year a number of new varieties of crops are trialled.

The Chambers work with specialist advisors to assist them in their farm management. An agronomist regularly monitors the health of the crop and helps with decisions about crop rotations. He also does extensive soil and tissue testing. An entomologist monitors the crops for

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pests and disease, and another consultant assists with their financial decision making.

"We have found it invaluable working with specialists," said Nicholas. "We are trying to be quite scientific about how we manage crops. Our biggest problem here is weeds." They handle that by hand weeding, mechanical weeding and flame weeding.

Planting takes place from September to December while harvesting is from March to July. People come to pick, weed wash, grade and pack the carrots which are then shipped off to Japan. They are also available in organic outlets in Melbourne, Sydney, Adelaide, Brisbane and Perth.

Fiona and Nicholas will keep their focus on producing quality fresh produce. Neither of them see that there is much of a future in small-scale conventional farming. "Conventional farmers who are getting $8 to $10 for a bag of carrots are really going backwards," says Nicholas.

Their commitment to organic farming is paying off. "Organic farming means an environmental responsibility, and it is a commercial reality," said Nicholas. "Nature always wins. Instead of fighting it we've got to work with it better."

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left: School children on a visit from Geelong hold up the big rug.

below: Mandi with the rug that is made and finished on their Maldon property.

Dreams Survive Rugged Living

Mandi and Ron Heath have been weaving rugs for more than two decades. But a recent order presented new challenges.

by Mandi Heath
Maldon, Victoria.

FOR over 25 years my husband, Ron, and I have been running our business, Wheel and Loom. We started in Emerald in the Dandenong Ranges, Victoria, in the early 1970s. We moved to Maldon, Victoria's first notable town, and have the longest-standing craft business there, having owned our shop in Main Street for over 20 years.

On our 20.25 hectare (50 acre) property, about six kilometres from Maldon, we have turned an open paddock into our own little paradise. When we moved on to the block the only building was a tiny run-down stone dairy, that we called the cottage. In true pioneering style, we lived in it for over two years without phone, power, or running water.

It was a kitchen for another six years. During that time we designed and built a spacious stone home, using recycled windows, doors and timber. We also became self-sufficient in water and power, and now have one of the biggest solar houses in Victoria.

The cottage now serves as a workshop, housing the three specially constructed wooden looms used for weav-

ing the high quality, double-sided Roham Rugs. These rugs are produced on our property — from sheeps' back to the finished article.

After the annual shearing of our Lincoln sheep, the wool is hand scoured before being put in frames and dried by the wind and sun. We then hand twist the wool ready for weaving. The rugs are made in various sizes, and colours from rich cream to shades of grey, charcoal, brown and jet black — we do not use dyes.

The lovely sheen of the Lincoln fleece is retained for years. Its inherent strength, combined with careful preparation and weaving ensures a long-lasting product. These handmade rugs add a touch of country to a home.

Recently we received an order for the largest rug we've ever made. When finished it will measure 4.5 metres by 2.4 metres (15 feet by eight feet). Our client wanted a multi-toned grey background with irregular cream and darker areas flecked throughout. We decided to call this effect Spotted Gum and will add it to our range, which consists of :

• White Gum: a plain cream rug which highlights the texture;

• Ironbark: a cream rug with darker fleece striations.

• Grey Box: various shades of coloured fleeces graduated in a striated sequence.

Years ago, a newspaper article described us as "dream weavers". I suppose we can make a good claim to that title for besides achieving our goals of completing an owner/built property with a certain degree of self-sufficiency, while managing the craft business, we have nurtured a 30-year marital relationship, and successfully raised four children to adulthood.

The dream goes on to share and show others that it's possible to achieve a dream. Over the past few years our farm has become a destination for schools and adult organisations. They see how our rugs are produced but they also get an insight into the way of life one family has created for themselves in the bush.

• For more information contact Ron and Mandi Heath at the Wheel and Loom, Main Street, Maldon, Vic, 3463. Phone (03) 5475 2368 during business hours or (03) 5475 2158, after hours.
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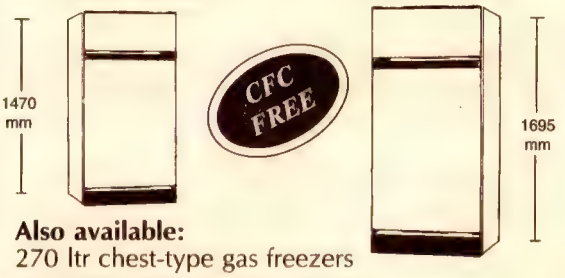

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A Lemon-scented Garden

A variety of plants can provide fragrance outdoors as well as medicinal and culinary uses.

by Leonie Bourke
Cobram, Victoria.

FEW Australian gardens are without a lemon tree, and despite its sour taste the lemon has remained one of our most versatile and well-loved fruits. For 3000 years its tangy, refreshing flavour has enjoyed enormous popularity in many countries. To enjoy the delightful fragrance of lemon wafting through your garden, in addition to a lemon tree, plant an abundance of lemon-scented herbs which can also be used medicinally, cosmetically, and to flavour many dishes.

Citrus lemon

A native of South-East Asia and belonging to the *Rutaceae* family, the lemon tree is widely grown. According to Mrs Grieve in *A Modern Herbal* published in 1931: "The trees reached Europe by way of Persia or Media and were grown first in Greece and then in Italy in the second century."

Christopher Columbus took lemons from Madagascar to America on his second voyage in the 1600s to use as a remedy against scurvy. In the 1500s, Spanish conquerors took lemon seeds to Mexico and Central America. Since then the fruit has been used throughout the world in cooking, medicinally, for bleaching purposes, and to protect fruit and vegetables from the effects of oxidation.

The lemon tree is a sub-tropical evergreen tree with small, white, fragrant flowers and oval, yellow fruit with a sour, juicy flesh. Growing from three to six metres high, it prefers nitrogen-rich, well-drained soil, maximum sunlight and plenty of water when the fruit is forming and ripening. 'Eureka' bears fruit year-round but mostly in summer; 'Lisbon' is mostly winter-bearing, and 'Meyer' has a single, yearly fruit crop which remains on the tree for several months.

Lemon trees need protection from harsh winds and frosts, and do best in areas with warm to hot summers and mild winters. As lemons do not ripen after picking like most other fruits they should be picked as required.

The lemon is a nutritious and versatile fruit and is widely used in cooking, sweets, and hot or cold drinks. The juice can be used fresh or frozen in ice cube trays.

The fruit, juice, and peel are rich in vitamins and minerals, particularly Vitamin C, and lemon juice has long been used to soothe sore throats, coughs, colds, rheumatism and fevers. The sharp fragrance of lemon lifts the spirits while the juice acts as a liver tonic. Mrs Grieve says: "It is probable that the lemon is the most valuable of all fruit for preserving health."

Lemon grass

Lemon grass *Cymbopogon citratusis* is a native of India and Sri Lanka where it has been used in cooking and medicinally for many years. A comparative newcomer to Australian herb gardens, it is now widely appreciated for its flavour and medicinal qualities.

This perennial grass grows in dense clumps of long, narrow, pale green leaves with a subtle lemon flavour. In the tropics or warm, sheltered sites it will grow to over two metres but in temperate climates it only grows to one

metre. Lemon grass grows best in rich, moist soil in a sheltered position, and can be propagated by root division at any time but preferably in spring. It needs protection from frosts and can be grown in pots or dug up and placed in a pot in a sheltered position during the winter months.

Lemon grass tips, leaves and shoots are often used whole in Asian cooking and discarded before serving. The fresh or dried leaves can be used in curries, chicken and fish dishes, and the tender stalks can be chopped and added to salads. A few chopped leaves added to water makes a refreshing hot or iced herbal tea.

Lemon grass essential oil has a toning, revitalising and antiseptic effect and is used to treat circulation, digestion, muscle tone and oily skin. Taken as a tea, lemon grass helps to clear the complexion, and gives it a fine texture.

Lemon thyme

Lemon Thyme *Thymus X citriodorus* is native to the Mediterranean region. Its botanical name *Thymus* is derived from the Greek word thymon meaning 'courage' and many traditions associated with thyme originate from this connotation. Roman soldiers bathed in thyme water and warriors in ancient Scotland drank tea made from wild thyme to give them strength and courage.

The Egyptians were aware of its antiseptic and preservative properties and used it for embalming. It is still an ingredient of embalming fluid, and is also used today to preserve anatomical and herbarium specimens.

Lemon thyme is a low-spreading perennial shrub growing to a height of 15 to 20 centimetres with pale, lilac flowers and small, lemon-scented leaves. It thrives in an open sunny position in light, well-drained soil and is suitable for borders, low hedging or for growing in containers.

The mild citrus flavour of lemon thyme enhances many dishes including fish and chicken, soups and sauces, marinades, stuffings, hot vegetables, fruit salads, paté, egg and cheese dishes and herb butter. It can also be mixed with parsley and bay in a bouquet garni.

Infused as a tea, lemon thyme is used as a digestive tonic. The infusion can be sweetened with honey for coughs, colds and sore throats.

Lemon verbena

A native of South America, lemon verbena *Aloysia triphylla*, formerly *Lippia citriodora* was brought to Europe in 1784 by the Spanish who grew it for its perfume oil. The Greeks believed that placing dried lemon verbena leaves in pillows would bring sweet dreams.

Lemon verbena is a deciduous shrub or small tree which can grow to 4.5 metres in the right position. The slender, green leaves are strongly lemon-scented and in summer, bees are attracted to the small, pale mauve to white flowers which grow in clusters at the tips of branches. It prefers a sheltered sunny position and light, well-drained soil and should be cut back to about one-third at the beginning of spring, or it can become straggly. The strongly aromatic leaves are a popular addition to pot pourri as they retain their fragrance for years.

The lemon-scented leaves can be used with fish or veal and in stuffings for poultry. They can be added to fruit salads or homemade ice-creams and used to flavour oils and vinegars. A few leaf tips added to iced water or fruit cups makes a thirst-quenching drink in hot weather. Traditionally, lemon verbena leaves were floated in finger bowls at banquets.

A refreshing herbal tea made from the fresh or dried leaves acts as a mild sedative. It can also reduce fevers and relieve indigestion.

Lemon balm

Lemon balm *Melissa officinalis* is native to the mountainous regions of Southern Europe. The herb was sacred to the temple of Diana and used for medicinal purposes by the Greeks 2000 years ago. Its botanical name *Melissa* is Latin for 'bee' as these insects are attracted by the scent of its small, white flowers.

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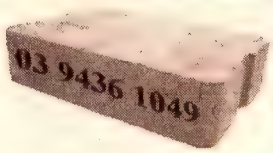

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Lemon balm leaves add a lemony flavour to salads, sauces and drinks.

Bee hives were also traditionally rubbed with balm leaves to keep the bees together and to attract homing bees. The word 'balm' is an abbreviation of 'balsam', a sweet-smelling oil.

This spreading perennial herb grows to a height of 60 to 100 centimetres and prefers a partially shaded position. The heart-shaped leaves emit a strong lemon fragrance when bruised and small white flowers appear in summer. It self-seeds readily and can also be propagated by cuttings and root division.

Fresh chopped leaves can be added to fruit or vegetable salads, white sauces for fish, mayonnaise, wine cups and fruit drinks.

An infusion of lemon balm has been used for centuries for its calming and uplifting effect if a person is suffering from depression. It is also used to bring down high temperatures and to assist digestion.

Lemon-scented geraniums

Scented pelargoniums, *Pelargonium crispum, 'Variegatum, Prince Rupert' and Pelargonium 'Mabel Grey'*, are natives of the Cape of Good Hope in South Africa. They were introduced into England in 1632, and became popularly known as scented geraniums. However, they remained relatively unknown until the French perfume industry realised their aromatic potential in 1847.

Victorian ladies placed pots of scented geraniums indoors in winter where their long skirts would brush against them, thus scenting the room. In summer, the pots were positioned along the edges of garden paths for the same purpose.

The flowers of scented geraniums are small, but oil distilled from the fragrant leaves is used in perfumes, aromatherapy and cosmetics. The variegated lemon crispum geranium, growing to 80 centimetres, has crinkled green and gold lemon-scented leaves which can be pruned into a compact shrub or left to trail from baskets.

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'Mabel Grey', growing from one to two metres, has sticky, coarse-lobed leaves with a strong lemon scent and forms a compact shrub suitable for low-hedging. Both varieties have small pink to lilac flowers in spring and like a sunny, open position in fertile, well-drained soil. They are frost tender, can withstand dry conditions and grow well in containers, hanging baskets or window boxes.

Leaves can be tossed in salads, infused as a tea and crystallised to decorate cakes. The liquid in which finely chopped leaves have been infused and then discarded can be used to flavour sauces, jellies, butters, jams and vinegars. A layer of 'Mabel Grey' leaves on the bottom of a cake tin gives the cake a delicious, lemony flavour.

The essential oil of scented geraniums is used in aromatherapy massages for pre-menstrual tension and fluid retention, dermatitis, herpes and dry skin.

The variegated lemon crispum geranium has a semi-trailing habit.

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Solar-Charging City Grids

Melbourne renewable energy dealer, Solar Charge, is finding more and more people quietly installing solar-electric rooftop systems in the suburbs.

Richard Potter
Solar Charge, Brighton, Victoria.

THE past couple of years have seen many people visit our shop and ask the question: "How do we use solar power on our suburban homes?". Until recently, many were put off by the cost. Not so Mr Hans Poulson of Mooroolbark who was intent on starting small and working up to a larger system as finances permitted. His system, with 4 x 53 watt Solarex panels and two small Oke inverters, cost less than $3,000 (plus installation).

Grid-connected systems have been around overseas for decades. Recent acceptance of solar-generated power onto the grid by electrical retail companies in several States has made it easier to have a few solar panels and run your meter backwards.

Mr Delano Reiss of Brighton in suburban Melbourne has a system that not only provides power for the home, but sends excess power back into the grid when it can.

Rooftop solar systems not only work, but are intrinsically safe due to the automatic shut down of the system should the grid power go down or glitch. Moreover, if enough households install systems, there is a real potential benefit to the electric company. Put simply, electricity distributors in Melbourne pay up to $3 per kilowatthour from the coal-based power stations in the LaTrobe Valley during summer peak load times.

We the consumer pay them only 12 cents per kilowatthour. Homes with solar power on their roof will be producing their peak power during these times, shaving the peak loads for the utility and saving the electricity distributor money!

United Energy, the electricity distributor for south-east Melbourne, have got right behind the project at Del's home in Brighton. A spokesperson for United Energy said: "We are pleased to be sponsoring the project which will provide valuable information regarding the energy delivery from a solar residential installation." United Energy performed on-site testing of the completed installation and will remotely monitor the system performance.

Del's system in Brighton comprises 18 x 77 watt Solarex panels mounted as three groups of 6 in series. Mounting hardware for a further 6 panels is in place. The panels are connected to an SEA 2.5 kilowatt grid-connect inverter which firstly looks to see that grid power is available and steady, then synchronises the output to the grid. Should the grid power fail or drift out of specifications for any reason, the inverter shuts down and isolates from the grid power lines. This is an essential safety feature which protects line workers from electric shock from the home system.

The 18 panel system is designed to contribute up to 6.5 kilowatthours per day in the summer months. Del says of the system: "I was keen to put a solar system into my new house and got together with Solar Charge to work it out. Hopefully I will never have another electricity bill in my life. This house is solar-powered by a grid-interactive system for the sake of our planet."

In addition to the system at Del Reiss' home, Solar Charge has installed a 12-panel grid-connected system at our shop in Martin Street, Brighton, to monitor performance and as a test point for equipment. Both John Paton, Managing Director of Solar Charge, and I have lived with solar power on our homes for many years — John for over 20 years. We are now considering converting our 'RAPS' (Remote Area Power System) suburban home systems to grid-connected in the near future. We firmly believe in living with and testing what our customers use.

The use of grid-connected systems in the city and suburban environment makes good ecological — and maybe almost fiscal — sense. Systems as small as two or four panels are possible for around $3,000, with larger systems around $15,000 or more.

Of course many sceptics argue that the 'payback' time is too long. However, perhaps they are looking at it the wrong way. The solar power system should not deteriorate, there are no batteries to wear out and replace. In fact the system is an additional asset on the dwelling that should retain much of its value upon resale of the home. There is virtually no maintenance required and once purchased, the power generated is offset against power that would have been consumed by the household at ever-increasing tariffs.

Besides there are many common household appliances and activities that are not "cost effective", including dishwashers and raising children! Like children, maybe grid-connected solar power is a sensible investment in the future . . .

• **Richard Potter is Technical Director of Solar Charge Pty Ltd, Brighton, Melbourne. Phone (03) 9596 1974.**

Season by Season

with JACKIE FRENCH

Earth Garden's regular saunter in the garden, with Australia's favourite organic gardener

The great apple glut

I have just made a vow.

I hereby promise that under no circumstances WHATSOEVER will I plant another fruit tree in this garden. Not even if it's an incredibly rare, old variety with a taste like heaven.

The problem is that for the last 15 years or so I've been planting old-fashioned Jonathon apples, which I adore (NOT the modern Johnnies that taste like a slightly stale sugar bowl) and Macintosh apples for Bryan (what else would you grow for a computer fanatic?) and Prince Edward for Edward (good muscular apples).

In fact if any member of our family or friends mentioned they liked a variety of fruit then I planted it, plus heritage varieties that might one day disappear plus cuttings and seedlings just for fun. And now everything is fruiting.

It's all very well planting 47 varieties of old apple trees. How the heck are you supposed to eat all the apples? I don't want to get back into selling fruit anyway. I'd rather give it away to people who appreciate it, and it's no use expecting the birds and wallabies to help, because they're all too fat to move — there's a Wonga Pigeon outside our bathroom who hasn't flown anywhere in a week.

I'm serious. It just sits there stuffed, as though it wished birds knew how to burp, then toddles down and eats a few more apples, pears or nashi pears, or maybe pecks a peach or two, then waddles back and very slowly climbs the stone terrace and sits there, trying to digest.

I could — possibly — be persuaded to plant more fruit that matures in winter. (I'm writing this in autumn. Rich, fruit glutted autumn.) We do have lots of fruit that matures in winter, but the advantage of winter fruit is that it doesn't ripen as fast as the summer stuff. If you don't pick it this week it's still hanging there next week, unless the birds get it first.

Winter Fruit

The most obvious winter fruit is citrus, which contrary to most gardening lore can be grown just about anywhere IF you are prepared to make a good sheltered spot for it, and plant the right sorts, like real cumquats, which are sweet — unlike the calamondin that most people think are cumquats, that are too tart for anyone except bower birds and small boys, who mostly seem to love them.

Cumquats are great in winter stewed with just a little sugar or honey, plus a bit of cinnamon bark (not the powdered stuff) then eaten with cream.

Cold Tolerant Citrus

There's a lot of confusion about which citrus are best for cold areas. I find Eureka lemons are MUCH hardier than Meyer lemons. But Eurekas are thicker skinned and generally thicker skinned citrus survive cold best.

IF YOU LIVE IN A COLD AREA, TRY GROWING CITRUS FROM SEED.

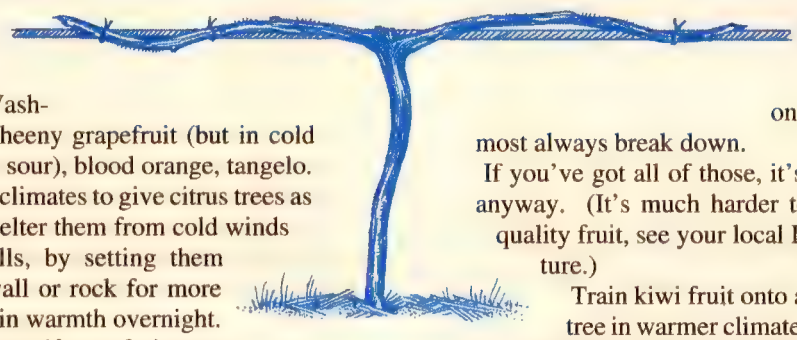
Most citrus you buy now have been grafted onto semi-dwarfing Rootstocks. This makes them resistant to root rots, but it also means they don't grow enormous —

most commercial and backyard growers nowadays don't want 20 metre orange trees.

However, the faster a tree grows the sooner its roots will get nice and large — and the larger the root, the more cold hardy the tree. I find seedling citrus are MUCH cold hardier than grafted ones — even if they are more prone to root rot in heavy soils.

Seville (bitter) oranges are probably the most cold-hardy orange trees, followed by Navel oranges. Tahitian limes seem more cold hardy than lemons, although they produce all their crop at once, unlike the lovely backyard lemon tree, which keep producing at least one or two fruit a week all year.

In terms of cold survivability, going by our experience here, I'd rank citrus in the following order: calamondin (most cold hardy), followed by cumquats, then Eureka lemon, Seville orange, thorny mandarin, citron, Tahitian lime, Washington Navel orange, Wheeny grapefruit (but in cold climates it tastes awfully sour), blood orange, tangelo.



Remember in cold climates to give citrus trees as much sun as possible, shelter them from cold winds with other trees or walls, by setting them against a north-facing wall or rock for more reflected heat and to retain warmth overnight.

In really cold areas, or if your fruit stays sourish, try paving around the tree or even concreting. (River rock-paving looks great and works a treat.) This can make a most extraordinary difference to the survival rate of your trees — and the taste of your citrus.

At the other end of the scale, the Mexican and Kaffir lime trees are quite happy in hot and humid climates. So is the pomelo, the biggest citrus of all. You can buy a cold hardy (and sourish) variety, a bit like a mutated grapefruit; but in tropical areas you can get really sweet ones.

Kiwi fruit

Kiwi fruit is possibly the ultimate winter fruit, and is the most prolific vine I know — it grows like Jack's beanstalk — and it is an incredibly fast way to cover a pergola. Kiwis are almost indestructible once they are established. We have been mowing the remnants of one vine for three years and it still thrives.

How to grow Kiwi fruit:

- Kiwi fruit must have chilling, 700 hours below 7° Celsius;
- They must have well drained soil;
- They must have good watering for the first three years;
- They must have mulch and water when the temperature is over 35° Celsius for the first three years.

And you must have a male and a female vine (or nine females to one male) but one to two females are more than enough for a kiwi fruit addicted family, and all their friends and birds. Avoid male and females grafted onto one vine - they almost always break down.

If you've got all of those, it's easy, for backyarders anyway. (It's much harder to produce commercial quality fruit, see your local Department of Agriculture.)

Train kiwi fruit onto a pergola, fence or up a tree in warmer climates. Be warned: the vine will get very big and heavy even if you prune it rigorously once a year, fences can collapse under their weight.

The first year prune back to the central trunk, with two main arms. The fruit is produced on this year's shoots from last year's growth — in other words, you get fruit from one year old wood, and anything older needs to be pruned back.

If you don't prune, you'll get a jungle that even Sleeping Beauty's Prince wouldn't hack through, and rats love to nest in the tangles. Every winter prune back vigorously — if you've trained it properly the first year or two, you'll have lots of long 'laterals' growing out of the two

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main arms. Keep about half of these and trim these back to a reasonable length. You'll also need to trim back any new laterals off the main arms in summer.

I know this seems complicated. In fact kiwi fruit are so vigorous that after five or six years, if you just cut it back to manageable size, you'll still have enough of last year's wood and this year's shoots for masses of fruit. Just remember that if you do go for a very drastic cut back, you won't have any fruit next season.

Propagation

Kiwi fruit may put out suckers — these may be an inferior root stock with a better one grafted onto it so avoid them. But if you know you have a seedling, a bit of root transplanted will usually grow into a good vine.

Most vines are grafted onto seedlings; I find seedlings produce good fruit, even if they are often small and round, but you won't know which is male or female till it flowers.

We also have wild vines appearing in the bush, the seeds carried by birds but as there are no other vines to pollinate them, I don't think this will be a major feral problem. (I hope these aren't famous last words, we do now have feral avocadoes and tamarilloes.)

If you want to take a cutting, which you know will be either male or female, take a 15 centimetre piece of dormant wood with at least one bud; dip ends into hormone rooting powder; bury TOTALLY UPSIDE DOWN, with the base about four centimetres from the top. In early spring dig the plant up again, and replant the shoots that have formed roots, the right way up this time.

Harvest

Fruit should appear after two to three years; some authorities recommend picking before frosts, but I find that frosts tenderise and sweeten them. Don't wait for the fruit to get ripe on the vine though, it doesn't. Pick and wait for anywhere from three days to two weeks for them to ripen indoors.

The riper they are, the sooner they'll soften inside. If they don't taste sweet, they aren't ripe enough to pick and if they leave a furry taste on your tongue, they are definitely not ready. Your homegrown fruit will be MUCH sweeter than shop bought stuff; and will have more flavour too.

Pick the fattest fruit first, and let that ripen before you pick any more because kiwi fruit are best stored on the vine. We let the birds get most of ours — the display as they try to balance and peck is worth losing the fruit for — and, anyway, a few hundred kiwi fruit is more than enough for us. But if the birds are getting more than you can spare, pick the lot. (Our bower birds finish off the calamondins before they attack the kiwi fruit, it's worth growing decoy crops if birds are really a problem.)

Using kiwi fruit

Fresh with a spoon like an egg (kiwi fruit peel is horrible).

Dip in sugar syrup made from three cups of sugar to one cup of water with the juice of a lemon, boiled for five minutes, then strung up with a needle and thread and left in the sun to dry. It takes about one week, take them inside when it's dark or damp, but the chips are really very good.

You can make kiwi fruit jam (you'll need to add pectin and also a few drops of green food colour if you don't want a pale brown jam). It's okay but not really worth the bother. Neither is kiwi fruit wine, kiwi fruit chutney, kiwi fruit fudge, kiwi fruit boiled lollies — all of which you can buy in New Zealand.

Kiwi fruit meat tenderiser

Lay slices of kiwi fruit on tough meat for about four hours to tenderise it. Throw away the fruit afterwards in case it's contaminated by bacteria. It's the best way I know to tenderise feral rabbit so you can grill thin strips on a barbecue.

Other winter fruit

Winter means there are still chestnuts on the tree among the frosty cobwebs and a few quinces and Lady Williams apples (every household needs a Lady Williams apple tree for June/July apples), and pomegranates and medlars and avocadoes.

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If you don't know what a medlar is, you haven't missed very much. If they didn't mature in winter after the frost has got them, I wouldn't bother with them. The fruit is about as big as a small apple and you pick it well after the leaves have dropped off the tree, after the skin turns dark brown instead of tan and the flesh turns brown instead of cream — after it starts to rot.

If you manage to forget that the fruit is rotten, it's not too bad. The tree is incredibly hardy, and will grow in almost any soil and take almost any amount of frost. It is also a beautiful autumn foliage tree, earning garden space for that alone. Medlars taste a bit like a fragrant pear with a touch of port, and medlars are supposed to be the only fruit that goes well with vintage port and doesn't spoil the flavour.

Avocadoes make a great hedge - very fast growing, trimmable and productive. You get fruit in about four to five years from seed. Avocadoes will actually take quite heavy frost. What they won't take is wind.

Back to Basics

It's a shock to be only in the middle of your life (I hope) and realise you have just about everything you want.

In terms of essentials — home, family, friends, wombats, livelihood — well if things stay as good as this for the rest of my life, I will be extraordinarily blessed.

Part of it, of course, is the result of a quarter of a century of actually building the home, the family, the friends, the garden and getting to know wombats but part is also suddenly realising that I've built up enough knowledge in that time to be able to cope with the day to day disasters that really are only disasters when you don't know how to deal with them. Sixteen years ago the loss of an apricot crop was a horror, now I know how to avoid it, and anyway it wouldn't matter as much because there are other crops.

So I thought I'd do a sort of back to basics. How to do just about everything, garden wise — in much too simple terms but if you have the general thrust of an idea, and you're reasonably able, you can work the rest out yourself. I go into much more detail in my books.

How to Grow Things

Plant them. (If you don't damn well plant them NOW they won't be fruiting, flowering, shading you in ten years' time.)

Mulch them. Mulch them again and again to keep the weeds down. (Usually the hotter and wetter your climate the more mulch you need but then, the hotter and wetter your climate, the faster stuff grows, so don't complain.)

Feed them at least once a year or when you happen to get round to it. Often the mulch is enough tucker anyway. (Yes, I know it sounds simple, but most people leave out a few of the critical steps . . . like planting them in the first place or keeping the weeds off in the first few years, or feeding.)

How to kill pests

Nowadays, on the very rare occasion I decide to kill something, I use a white oil spray, a homemade one in winter, and a commercial one in summer, because the modern commercial ones can be used in hot weather, when my home made one burns off young foliage when the temperature rises over 24° Celsius.

I like oils sprays. They kill whatever they're sprayed on by suffocating them so that if anything decides to eat them later, they won't kark it too. (Just make sure you avoid oil sprays with added pesticides.)

IN ALL BUT A FEW CASES, HOWEVER, YOU CAN USE REPELLENT OR DIFFERENT GROWING METHODS SO YOU DON'T NEED TO USE PESTICIDES.

If you ever find yourself killing ANYTHING regularly, then you have a management problem, not a pest or weed problem.

How to kill weeds

- Mulch over them (also consider mulches that don't break down quickly, like Eucalyptus leaves and bark);
- Pour boiling water on them (they wither at once delightfully);
- Temporarily fence chooks into the area to dig it up, plus manure it;
- Mow and keep mowing for about 18 months (grass evolved to be regularly mown; most weeds ARE weeds because animals won't eat them so if they're REGULARLY mown they'll die;
- Use goats, horses, pigs in electric fence enclosures for large clumps;
- Shade weeds out with other plants;
- Change your cultivation methods: keep geese to graze on unruly grass around trees; plant alyssum, pansies or a permanent sward of chamomile between vegetables so that weeds don't germinate; use grass suppressant tree guards; grow crops of poppies or sunflowers and other natural herbicides to clean up weedy areas (see also the *Organic Control of Common Weeds*.).

PS: if you have blackberries and they can't be regularly mown for two years, and electric fencing for goats around them isn't feasible, do a little trial. Take two clumps of blackberries. Spray one with herbicide. (Okay, you'll have the health risks any herbicide spraying engenders but you're doing this for science.) Then hire someone to slash back the other clump, and mattock out the centre. Compare costs. Wait until next year and see which clump comes back — or doesn't. On past experience around here

the sprayed clump will have cost more and will also return more vigorously.

How to feed things

Unless you are totally, absolutely self-sufficient AND sell or give away produce, the rubbish from the stuff you bring in, plus your prunings, plus chook food and nitrogen fixed from the air by leguminous green manure, should supply all the nutrients your garden needs.

Get chooks - it's a heck of a lot cheaper and more ecologically sustainable to buy food for chooks than fertiliser — then use the dung.

Use green manure. Add trace elements every 20 to 30 years. Compost every deceased thing you can conveniently get your hands on, including bones, dead rabbits on the side of the road (I sincerely wish my family would be legally able to compost me — eventually).

Use your own urine but no more than once every six months in the one place, and dilute it with ten times the amount of water. And remember, it is NOT sterile.

Treat yourself to seaweed spray or lucerne mulch if you're feeling flush. Remember, it's more cost effective to buy hay or seaweed spray than sulphate of ammonia, even if it seems cheaper at first glance.

How to cope with too much work

Hire someone for a few hours a week. If it's a choice between buying vegies and hiring someone — you'll find hiring someone is cheaper.

Get rid of the lawn. Mulch. Forget about what it looks like. A garden shouldn't be there to impress the neighbourhood — it's for you and your loved ones, which hopefully includes lizards and birds. Bugger the weeds and tangles, think about the scents instead.

How to cope with birds and other things that eat everything

Grow more and more and more.

This can be done to excess. I would dearly love another hundred birds to descend and eat our surplus apples this year. You will also have to persuade the bower birds that no, they'd really rather eat apples than grapes of which we have not quite enough for the family. Re-education of the wildlife is not easy but it's possible by using repellents and bird nets and yelling a lot — and one day we'll have a surplus of grapes.

Some Great Discoveries of the Past 25 Years

Wombat gates can be pushed open by wombats but not by wallabies because the gate is too heavy. I've discovered that a long cement pipe stuck through a wombat hole in the fence does just as well, wombats will wander down it, but wallabies won't. If you want to get a wombat out and stay out — say from under the house — make a gate that swings only one way.

Wallabies can sneak between barbed wire, no matter how tightly it's stretched but if you replace the single wires on top of the fence with netting it makes a solid barrier they'll avoid. Even though they can jump over it they almost always won't.

Re-inforcing mesh makes the most wonderful trellises and compost bins. If you want to make a re-inforcing mesh compost bin, just bend it so it forms a circle, stake it firmly and throw stuff into it but don't pack it down too hard. Compost needs air which is why most fibreglass ones don't work. Use re-inforcing mesh to edge carrot beds so wombats can't dig under.

Chooks are infinitely better at ploughing than tractors. Tractors don't leave manure either. (Thank goodness, imagine the sort of droppings an internal combustion engine would leave.)

Most farm tractors are pets, not tools. While I don't begrudge men their pets, if you are being truly cost-effective, you'll hire a tractor when you need it, rather than spend weeks tinkering with your own. (But then who wants to live a truly cost-effective life?)

Small birds find lovely, rambling, old-fashioned rose bushes the best shelter possible for their nests. Most roses grow very easily from cuttings. Hack off a bit of wood about the thickness of your finger, but as long as your hand or longer. Place it in two-parts sand to one-part potting mix or soil; keep moist and semi-shaded. Plant out next winter. But cuttings, especially from ramblers, just bunged in the ground often take if they're kept moist.

What we'd do differently

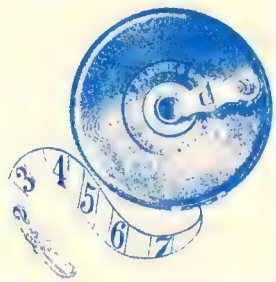
Plaster the kitchen walls so they were smooth and washable. Rough walls in kitchens collect fatty grime and cobwebs and are bloody hard to clean.

- Avoid Chinese paper mulberries like the plague they are.
- Get a composting rather than a septic toilet.
- Not even have considered earning a living from the land — there are so many other ways to make a living in the bush than farming. Too much of Australia is already used for humans.
- Not planted so many bloody apple trees (and made sure we only had ONE apple tree maturing at any one time).

WHAT'S YOUR PROBLEM?

BOB RICH ANSWERS QUESTIONS ABOUT OWNER BUILDING

Stone walls? Want advice on building a cellar? For anything you want to know about owner building, write to Bob Rich, c/- What's your problem? Earth Garden, RMB 427 Trentham, 3458, Victoria. Please enclose a stamped, self-addressed envelope. For readers who do not want their letter published, please enclose $20 with your question.



Improving the insulation of a tiled roof

A reader from Western Australia writes:

My house is roofed with reddish-brown concrete tiles. The roof space is insulated with R2.5 fibreglass batts. Is it worthwhile to paint the roof with a white or aluminium-based paint to reduce the summer heat? Also, would an undercoat be necessary? I would use an oil-based paint as I drink the rain-water collected.

Dear reader,

Certainly, changing the surface colour of your roof from reddish brown to blinding reflective would reduce the heat transmission through the roof, both in summer and winter. It might make enough of a difference to eliminate the need for air conditioning altogether.

However, there are two problems with your idea. The first is aesthetic. Most people would think a zincalume-seeming tiled roof looks terrible, and there may be zoning restrictions against it on this ground (check with your Council). The second is the difficulty of painting a porous concrete surface. The results might not be what you expected.

The insulation due to a reflective colour works wherever the shiny surface meets air (an air gap of one centimetre is sufficient). So, you should be able to achieve the same effect by installing a layer (or an extra layer) of reflective foil laminate. This is the aluminium-covered sheet material builders use for sarking. If you can get into your roof area, you can simply tack a layer of double-sided RFL to the underside of the battens or rafters. This will have two extra benefits: reduction of the passage of air between the tiles (a source of temperature exchange not controlled by paint), and improved fire safety. Just specify fire rated RFL, it will resist a fire for 15 minutes, about the same as a sheet of fibro.

If the roof space is not readily accessible, the only way to do this would be to remove enough tiles to get at the underside. Of course, this makes the job far more difficult and time-consuming. Only you can decide if the effort is worth it. Maybe it would be no more work to sell the tiles and replace them with a zincalume roof!

You can also install extra bulk insulation into the roof space, R2.5 is not all that much. The easiest way might be to have the stuff that is blown in, put on top of your batts. Only, make sure that it has been properly fireproofed. You can insist on grabbing a few handfuls during installation and exposing them to a flame. The stuff might burn while a flame is actually playing on it, but should go out as soon as the heat source is removed.

One final possible solution is to attach an insulating layer to the underside of your ceiling. Twenty-five centimetre thick insulating panels work well, but are rather expensive. They might be available secondhand if an office building is being demolished or refurbished. You might be able to adapt porous recycled materials, but be aware of fire safety, and the fact that certain foamed plastics are terrible in a fire. They release poison gases into the air, and drip Napalm-like burning drops.

I hope I have given you enough food for thought.

All the best, Bob.

What are the alternatives to cement?

Dear Bob,

I have recently bought a share in a new community being established on the mid-north coast of New South Wales at Crescent Head.

The property, named Beranghi, is set in wetlands and much regrowth forest, a beautiful and spiritual place.

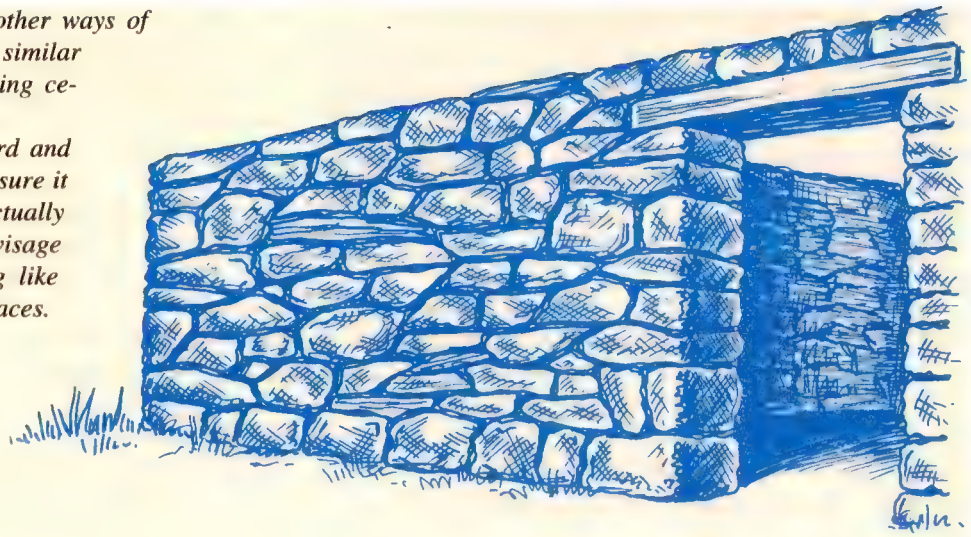
As there is an abundance of stone on the property, I am keen to use it as building material. I have discovered 'slipform' methods of cleating walls using cement and smaller rocks as an infill between stone layers, but my problem is I don't want to use cement due to its unsustainable qualities.

Have you heard of any other ways of building walls of stone, in a similar manner to slipform, without using cement.

Dry stone walls seem hard and time consuming, although I am sure it would be a satisfying project. Actually when I think of this method I envisage an avalanche, or tears flowing like waterfalls over crumbling rock faces.

Any advice in my building ventures is appreciated and anticipated. Thanks muchly. A keen urban ecologist.

Adam, Hurstville.



Dear Adam,

Thank you for your letter. I am encouraged that there are many of us who care about the future and try to use the planet in a responsible way.

It is of course possible to build a solid, durable, weatherproof drystone house. There are plenty of them in Wales and the south of England that have stood for hundreds of years. However, this is a skilled task, and very time-consuming, as you have noted. Also, you would have to convince a building surveyor to issue you a permit for building a house this way, and I doubt that they would come at it.

Another possibility is to build what is technically an earth wall, with stones set into it on the outside face. If you have clay soil, you can set up forms and pour a mudbrick mix into them, cutting the mud with a trowel at approximately brick intervals to guide shrinking. This is one version of 'formwork cob', or 'poured earth' as it is often called. There would be nothing against making the outside face of stone, provided the stones were embedded sufficiently to stop them from falling out. If you do this, go up in rises of not more than 200 millimetres, and allow time for the mud to dry before putting on the next level. An occasional stone should go nearly all the way through, but most of the wall should be mud. The minimum thickness of the wall should be 300 millimetres, and its design and construction should obey all the rules of a good earth wall.

Of course, nice as a stone wall is, an earth wall without stone is much faster to build, and lighter work. I love stone laying, but built my house with earth walls. Another consideration is that stone is a very good conductor of heat, so a stone house can be hot inside in summer, and cold in the winter. An earth wall with stone facing should work better thermally than a stone wall.

My final comment is that cement is actually not as bad from the environmental point of view as many other commonly used materials: fired bricks, aluminium, rainforest timbers. Certainly, the components of cement have to be quarried, but the energy content of manufacture of cement is only a small fraction of that of fired bricks. With a stone wall, the bulk of the wall is the stone, in my opinion the energy cost of the cement in the mortar is not too bad. Of course I respect your point of view on this.

Good luck with your project. Bob.

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Where does a first-time builder begin?

Debbie from Victoria asked a long list of questions typical of the worries I used to have before starting to build my first house, and I suspect most first-time builders feel the same way. I thought I would play a little game: perhaps readers will be able to deduce her questions from my answers.

Dear Debbie,

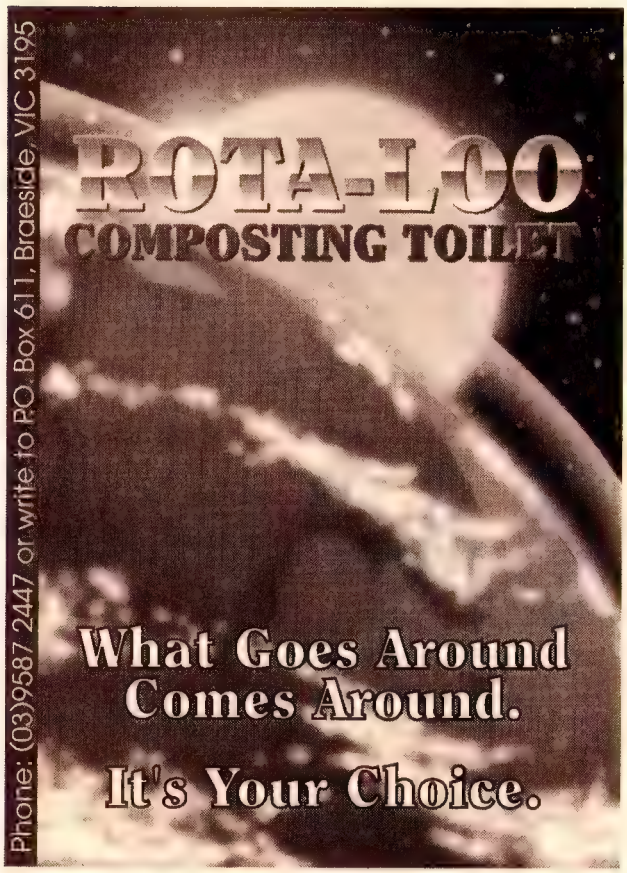
Thank you for your letter. You have already done some of the right things, building an emu shelter from mudbricks, and planning to practise on a shed. Now, I am not advertising, but from your letter, I think you'd benefit greatly by reading the *Earth Garden Building Book*. Borrow it from your local library. It will answer many of your questions. Then, if you like it *Earth Garden* can sell you a copy.

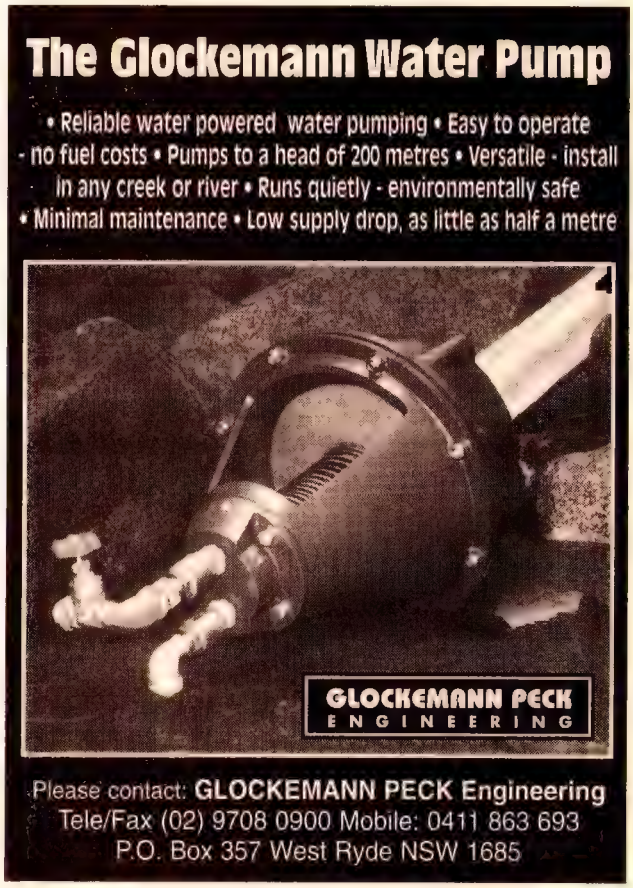
It is perfectly acceptable to use either strawbale or mudbrick as an infill for an existing open structure like a hayshed. The Council must be told about all structural details, certainly including the material the walls are made of. It is also an essential question: will they let you live in a temporary structure while you are building the main house? The only important thing to watch is that the walls and the loadbearing structure must be tied together in some way so they can't move independently.

A loft house is cheaper to build than the same floor area in single or double storey, because the top floor is enclosed within the roof structure. However, there are also disadvantages. The roof line must be steep. The top area is inevitably smaller than the bottom one, and may have odd, hard-to-use nooks, further reducing the actual, usable floor area. Unless you can keep the two floors so they can be sealed off from each other, you may find the ground floor too cold in winter (because the heated air rises), and the top floor too hot in summer. As with any multi-level structure, stairs may be a problem for people with temporary or permanent disabilities. Finally, a beginner at building may find the working height intimidating.

Loadbearing and post-and-beam construction cost about the same, and involve about the same amount of work.

One question is the availability of structural timber of sufficient size for the supporting structure, and the environmental cost of using the additional trees. Another consideration is climate. Post-and-beam infill walls (like your shed) allow you to build while staying out of unpleasant weather.





However, a number of families have built a loadbearing mudbrick house, yet had their roof on first. They constructed the roof on the ground and had it lifted by a mobile crane while they propped it up and temporarily tied it down very strongly. When the walls were finished, the roof was lowered down onto it. You can do this by using acro-props as temporary supports. These are steel rods with a turn-buckle in the middle. They work something like a car jack. However, this sounds a little complicated for a first-time builder. I believe in the army engineers' motto: KISS (keep it simple, stupid).

In the *Earth Garden Building Book* you will find a chapter on renders. An inside render is certainly necessary to keep down dust, and many renders allow the wall to 'breathe'. For the kind of soil you described, I would try a cement-lime whitewash.

Any wall material can go with any flooring technique. Have a timber floor on stumps by all means, if you find that more comfortable. I prefer a floor on the ground (for example, a concrete slab), because that is part of solar efficient (passive solar) design. The floor acts as a heat sink, cooling the house in hot weather, warming it in the cold.

I hope you and your four kids make a success of your building project, Bob.

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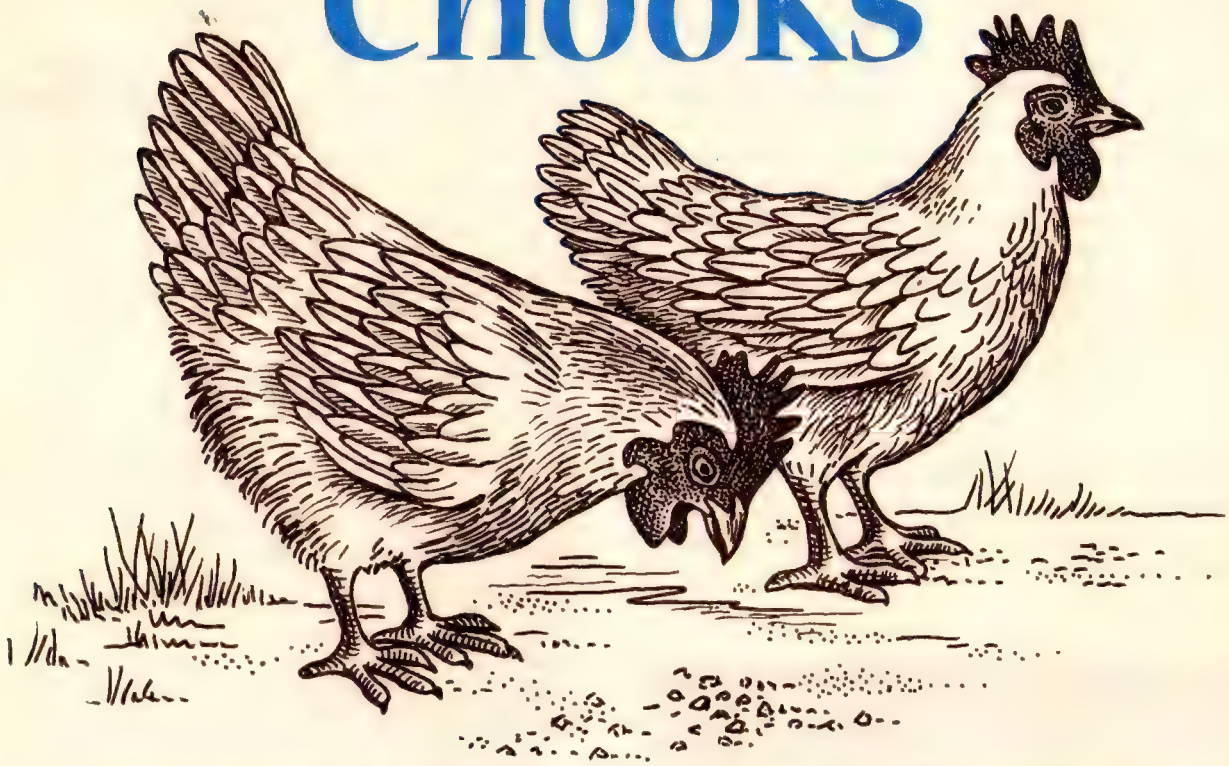
EG1

Battery Hens Turn Into Chooks



It took a while, and a few instincts to return, but Anna's two black pets came good in the end.

by Anna Italiano
Yarrambat, Victoria.

CHOOKS, they were my pets. All my other friends had a dog or cat but I had chooks. As a small child I would raise them from chicks. I had about ten yellow and black chicks scampering around my feet, they followed me everywhere — I was mother hen to them. My chicks grew up to be beautiful hens with glossy feathers and plump breasts and they laid eggs every day.

I have my own place now, but it is not complete until I have my own chooks. I sat down and worked out where to put the chookyard. I had to take in a few considerations like my neighbours, the size of the chookyard, my budget, how to build it, and the number of hens.

Once I had it all planned I paced out an area of about three metres by three metres, this was enough for them to forage around in. On one side I had a shed wall and the other side the boundary fence, so that meant I only had to construct two sides and a door. Next I used 180 centimetre (six foot) posts of about 50 millimetres by 50 millimetres. Away I went happily with the little sledge hammer banging them in the dirt, I pushed them in about 60 centimetres. I then secured chicken wire to the posts with strips of wire, the chicken wire was one metre in height, this enabled me to throw scraps over without entering the chook yard.

The door consisted of the frame I made and attached chicken wire and used hinges to attach the door to the post. The chicken roost was made from cement sheets and it was one metre square with a small opening at the front. I put in a natural wood branch for the perch, threw in some straw and a small terracotta saucer that I found in the shed. Then I painted the roost and positioned it in the chookyard and spread more straw in the chook pen.

All it needed now was the chooks. I planned to have two chooks, as I thought I would be able to keep up with the eggs and would have enough scraps for them to eat as well as chicken pellets. From previous experience I have found that black hens are better layers in winter.

For about $1 each the local chicken abattoirs will sell you battery hens that are still laying. I bought two black hens and boy, did they look miserable! But who wouldn't feel awful if you were kept in a cage and crowded like a sardine in a can.

The hens were released into the chookyard — you should have seen the look on their faces, they were not sure if they were in chook heaven.

They would not move at all, I had to train them to roost at sunset and show them out at sunrise. It was just as well I did not have to train them how to lay, that would have been fun and games. Our daughter Francine named them Penny and Henrietta. She was so excited and was looking forward to the first egg being laid, but she waited patiently.

For about a week the hens stretched and flapped their wings, what a sight this was, they probably didn't even know they had wings, being locked up in those cages.

They soon learned how to peck and scratch and have dirt baths. They improved in appearance and within one month they were plump and their feathers shone proudly. During the day I also let them in the garden which they enjoyed immensely. Just before spring I collected snails which they feasted on.

The hens were so busy having a great life that they forgot to lay me some eggs. Francine would run out to the chookyard everyday to check for eggs and she was getting a bit disappointed. So one day, I said to them: "You better start laying or back to the cages!"

Funny thing, but that afternoon one of the hens started to cluck. I went out to see what the noise was about and there it was, an egg sitting on the terracotta saucer among the golden straw. What a sight this was, the fruit of my labour, what a proud moment this was for me.

Not only did my chickens lay eggs, they also made fabulous compost. I would throw in grass clippings and vegetable scraps and garden scraps, the chickens added the fresh manure and turned it over. After three months it was time to collect the compost and add new, fresh straw and the process would start again. The vegetable patch is heavily mulched with the compost and I happily grow endless vegetables.

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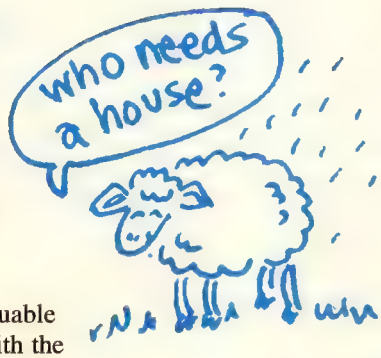
Jillaroo Farm Hints

Edited by Jill Redwood

Ever thought of putting a brick in your toilet to save water? Want to know new ways to keep out the chill of winter? If so, then read on. Jill welcomes readers' hints. Send them to Jill Redwood, RSD Goongerah, Victoria, 3888.

Fleece stops the draughts

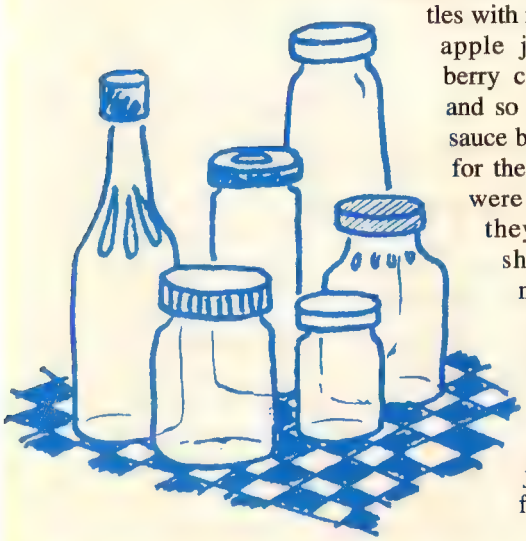
If you have a handmade house with ventilation gaps then use raw fleece to plug the holes. It is a perfect insulation and draught-stopping material (ask any sheep), as well as being cheap and eco-friendly.



A jar for every reason

The throw-away jar is a valuable commodity for home preservers. With the autumn food glut having passed, it's a good time to begin saving containers again. I always run short and have to leave a lot of food unpreserved only for lack of jars and bottles. My most valued jars are the smaller-sized ones that can be emptied quickly before the contents begin to go mouldy. Those with plastic lids are best for pickles and relishes or anything that has a vinegar base. In time vinegar will corrode tin lids. However, these lids are perfect for jam jars.

Check to ensure the rubber strip inside the lid is okay and there are no dints around the edge which can stop a good seal. I also save bottles with robust lids for apple juice, blackberry cordial, sauce, and so on. The true sauce bottles are best for the purpose they were built for — they have no shoulders and make for a smooth run for the sauce when tipped up.



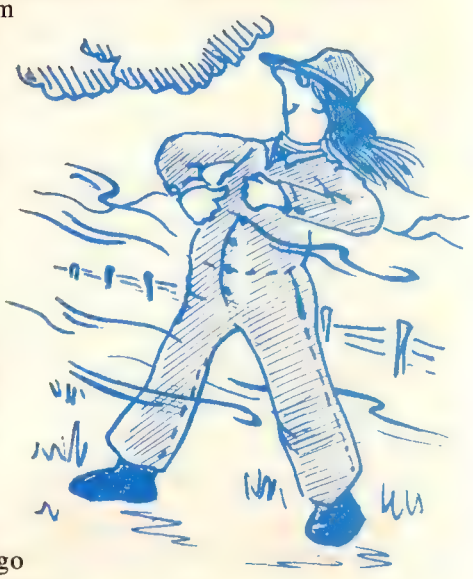
Larger jars are great for preserving tomato soup or even fruit. If they have a good seal and can be sterilised, they can be as effective as the Vacola jars. The local glass recycling depot is an excellent source of jars and bottles.

A brick in time

To save water in a cistern flush dunny, take the top off and bung a brick or two in there. This saves over a litre with each flush.

Winter-proof

Winter-proof yourself by wearing a woollen vest under your jumper and a pair of long johns or leggings under your strides. It's amazing what a difference this makes. Keeping the torso and heart area warm is very effective. It leaves you less bulked up than wearing two jumpers or a jumper and jacket.



There are any number of daggy knitted woollen vests in op shops to choose from. If the cold is still sneaking in at the edges, don a boiler suit over the top of everything and then go challenge the elements.

Changing tyres

When changing a tyre on soft earth, find a large firm base (a wide flat rock or a slab of wood, for example) to sit

the jack on. Just make damned sure the car won't roll off the jack if it does start to sink.

Drilling without splinters

To stop the back surface of a piece of wood from splintering and ripping when the drill bit breaks through, place the wood on top of another piece of scrap timber.

And now from our readers . . .

PET bottles make serviceable hot water bottles. No, they don't leak. I actually stood on one and it held, and I weigh 110 kilos fully armored! They can take well over 100 degrees and a two-litre version can stay warm all night. Not as good as re-useable bottles but better than land fill.

— Brendan English, Preston, Vic.

. . . and maybe a thick sock over the top would make it a bit cozier to snuggle up to. Jill.

When shopping I avoid plastic bags but not paper bags. These I save for lining cake tins when cooking, saving on buying baking paper.

— Tamsin Denniss, Chiltem, Vic.

A good use for the old Hill's hoist rotary clothes line — fix it in the ground where you want your nursery, wind it up to its full height and bolt or weld it into place. Then cover it with shade cloth or plastic. Hang plants from the bars or wires.

— J. Freeboume, Boatharbour, NSW.

Something I learnt from my father: a chaff bag makes a good raincoat if you haven't your oilskin handy (he used Hessian but I assume the synthetic woven bags would do as well). Poke one corner inside the other to form a hood and use the rest of the bag as a cloak. The bigger chaff bags are best for this. If you're doing physical work or bending over for gardening, for example, it allows far more freedom and you don't sweat as much as in a plastic raincoat.

— Neil Barraclough, Briagalong, Vic.

• Thanks for the ideas. Readers' farm hints are always welcome. Please send them to Jill Redwood, Private Bag 3, Orbost, 3888, Vic. Or Email: <croeg@bigpondcom>.

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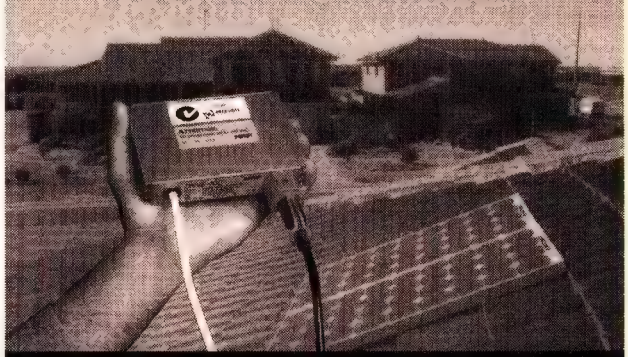

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In My Tropical Garden

by Liz Sinnamon
Kenilworth, Queensland.

Hidden dangers for the barefoot gardener

AS I write this, I'm recovering from a severe foot infection. I usually go barefoot in the garden during the warmer months, but there are hidden dangers for the shoeless gardener. Soil contains many types of micro-organisms, some good, some bad.

I'd excavated a small area in the outside laundry as a preparation for pouring a slab of concrete, when I jabbed my toe on a piece of steel mesh. Within hours my foot was swollen and extremely painful. Diagnosed as a staphococcus infection (a very virulent type of bacteria which can be present in soil) the infection spread quickly from my toe to above the ankle. A course of antibiotics was necessary, and from now on I intend to wear shoes when I work in the garden.

On a lighter note, during the past few years my banana trees have failed to produce any decent sized bunches of fruit. I grow Lady Fingers which are smaller than the commercially grown Cavendish, which home gardeners are not permitted to grow. Bananas are quite heavy feeders and I thought they may be lacking nutrients. My house-cow provides lots of cow manure, so I chopped up a heap of pads with the lawn mower, cleaned out the straw litter from the chook shed, and filled the wheelbarrow with good compost. I spread layers of cow manure, litter and compost generously around the trees, then sprinkled on a few handfuls of ground rock mineral fertiliser. I piled lots of grass clippings on top, taking care to leave a six centimetre space around the trunks. If mulch is placed too close to the trunk it may encourage the banana weevil borer, a major pest of bananas.

There were also too many suckers (young trees) growing close to the mature trees, so I cut these off and after scooping a hole in the centre of each trunk, poured in a teaspoonful of kerosene. This ensures that the sucker will not regrow. Bananas need plenty of water and after an excellent wet season I'm now harvesting some beautiful bunches of fruit. Commercial growers cover the developing bunch with a large plastic bag, but I don't find that necessary.

I usually cut the bunch a week or two before they are fully ripe and hang them under the front verandah. Harvested in this way their nutritional value is the same as tree-ripened fruit and the bananas can be cut from the stalk as they turn a deep, rich yellow.

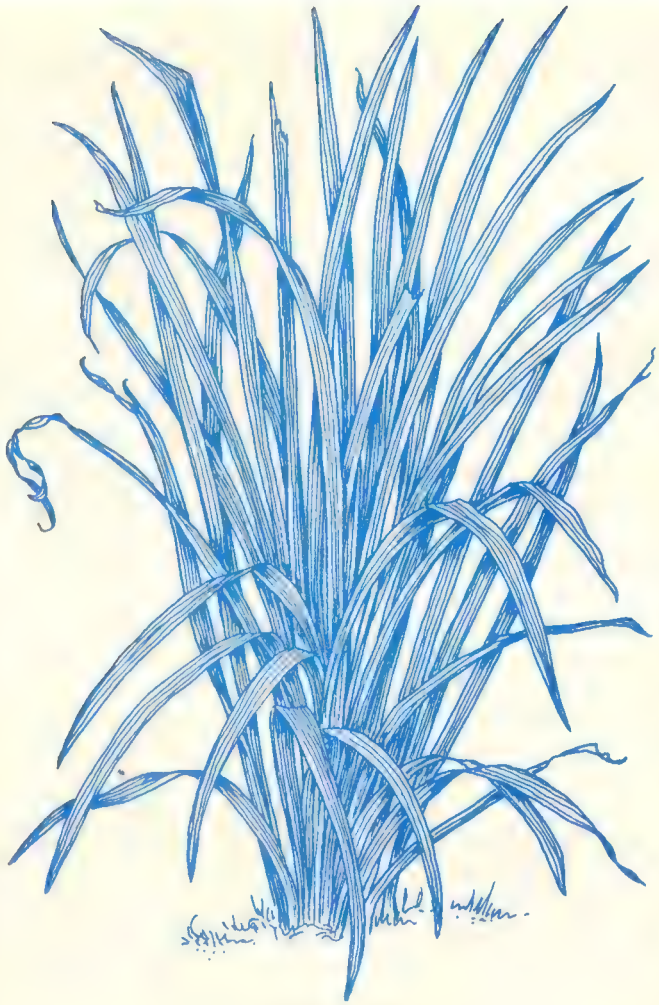
The lemon grass has also enjoyed the wet and the clumps doubled in size during the summer. I add a few chopped lemon grass leaves to my morning pot of tea. It adds a delicious lemon flavour. A friend of mine who has adverse reactions to caffeine, drinks lemon grass tea as a substitute for tea and coffee. He adds a little honey and reckons its the best hot drink in the world. It's really easy to grow, is quite decorative and the chopped base of the leaves gives a subtle lemon flavour to oriental dishes and stir frys.

The tea is wonderful for winter coughs and colds and contains large amounts of vitamin A. As it dies back during the colder weather, I harvest the leaves at the beginning of autumn and dry them. I tie them up in bunches and hang them in a cool, dry spot. Then I chop the leaves into two to three centimetre pieces and store them in an airtight jar for use during winter.

As the clumps grow about 15 centimetres across the

base during one growing season, it's easy to divide these in spring with secateurs or a sharp spade and give them to friends or plant the rooted pieces in another spot. Lemon grass likes lots of sunshine and plenty of water.

Winter is short in the sub-tropics, but I love growing cool climate vegetables like silver beet, broccoli, cabbage and cauliflowers. Silver beet planted in April, will usually continue to produce leaves until November, although true spinach tends to bolt to seed before producing a decent crop. I've found the best cabbage to grow is Sugar loaf, a small hearting variety, that matures in 60 to 75 days. The larger types of cauliflower need about 155 days of cool weather to mature, but Phenomenal Early is very suitable for warm climates and matures in 110 days.

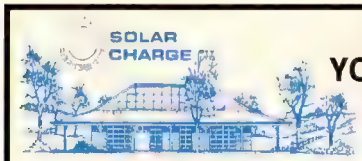


Lemongrass

Carrots can also be tricky, as the roots develop a slimy root-rot in hot humid weather. All Seasons is the main Queensland variety grown, and is also popular in New South Wales. It is virus resistant, develops a good-sized root and matures in 65 days. The Japanese Daikon radish (Fukuoka used this as a wild-sown under-storey in his mandarin orchards) is also a favourite of mine. The crisp white roots add a delightful crunchiness to stir fries. I plant the seed after I've harvested the summer corn. They don't need a lot of fertiliser, the soil still contains enough nutrients to produce lots of tasty roots.

A favourite herb of mine is coriander. I cook a lot of curries and fresh coriander adds a unique flavour that can't be beaten. It can be a difficult herb to grow in this part of Australia as it will bolt to seed quickly in warm weather producing few sprays of foliage. Seeds can also be quite slow to germinate. I usually allow about three weeks for germination. I plant the seeds in between rows of winter vegetables. At the end of the season I let a few plants go to seed, and sometimes these will germinate of their own accord the following winter.

I'm always short of compost, I never seem to have enough, so during the summer I made a special effort to make heaps. Weeds (which grow prolifically during the hot weather), spent crops, mud crabs and kitchen scraps (the wet resulted in a great season for mud crabs in South-East Queensland) and lots of cow manure, were piled high in the compost bins, covered with grass clippings and left to mature. I've been digging it out for the vegie garden lately and it's beautiful!



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Spare a thought for baby bats

Joy Hildebrand has just written pointing out that bats (unlike possums and other marsupials) leave their babies behind when they go out to hunt at night so any readers who want to get bats out of their roof WAIT UNTIL AFTER BREEDING SEASON, that is summer and spring before sealing up their homes.

Joy enclosed a plan of a bat box, which readers might like to try, and remember, if you have insect-eating bats breeding within a kilometre, you almost certainly won't have a problem with codlin moth and other night flying pests and there'll be a lot fewer mozzies.

Ways to deal with rats

Dear Jackie,

Hope you can help! I recently moved to Anglesea and found we had rats in our roof. My son refuses to use poison and I agree up to a point as I do not like to make them suffer. I called the RSPCA and other places but I got no help. I hope you can give me some solutions or suggestions.

Thanking you,
Regards from Ada, Anglesea, Vic.

Dear Ada,

I agree with your decision not to use commercial products not just because of the pain suffered by the rats. More and more information is coming to light on 'secondary killings' — birds like owls or goannas, for example, who eat dead or dying rats then die themselves.

The rats in your roof are probably black rats. These rats most likely came with the First Fleet and have been spreading ever since. The black rat is the plague rat (just to make you feel really paranoid; but there hasn't been a plague outbreak in Australia for around a hundred years). It likes climbing.

Black rats eat almost anything that is living or has once lived. They'll also climb fruit trees to eat the fruit, corn stalks to eat the cobs and tables to get to left over meals. They also eat enormous numbers of snails, though this isn't enough of a reason to cosset your rats.

The black rat appears to co-exist with the bush rat. We certainly have both here, each occupying their own niche so make sure you only trap/ kill where you are sure you only have black rats.

Black rats are mostly grey-black to pale brown. The body is slender, the tale longer than the head and body, the ears large and thin. They build large, untidy nests of shredded paper, grass or bark, preferably up high in roofs or walls or hollow trees but also in reed beds. They may also dig short burrows. In the wild they rarely live more than a year.

We had incredible problems with black rats here a few years ago. Then I discovered that they'd built great nests in the kiwi fruit vine on the pergola just outside the house, and in the jasmine vine, and a giant nest in the Jacaranda tree. We got rid of the nests (actually it was Edward and Bryan, I got the horrors) and that got rid of the rats.

The next thing to do is to make sure your house is rodent proof. Make sure they can't get under the eaves (nail on fly-wire — also good for stopping bushfire debris) and make sure that windows are all screened and that doors fit well. You can buy rubber bits to stick on the bottom if they are too high.

A mouse can get through a one centimetre hole. A rat can squeeze through an opening as high as the width of your finger. Tough flyscreen is the best answer.

Install metal shields on all pipes leading into the house or up to the roof. Cover any area with metal sheeting that might be gnawed through to effect an entry. Check all holes into the house.

Timber floors aren't vermin proof. If you are designing a house or shed, try to have concrete floors where food will be kept, or use a tough floor covering, well sealed at the edges.

Don't forget that owls and many other birds, including kookaburras, hawks and other birds of prey, reptiles and foxes are all rodent predators. Open areas around houses, sheds and fences will help them catch their prey by making the rats and mice more visible.

Cats and some sorts of dogs, especially terriers, will catch rodents but they'll also catch rodent predators and keep birds from the garden.

Traps and baits

With practice, traps are quick to set. Try lining them against a wall, at least a dozen of them for large numbers, set at right angles, with the trigger closest to the wall.

Rodents often scuttle against walls, using them as sheltered run ways. With large numbers of traps don't bother about baiting them individually, just scatter cornmeal or wheat-germ in a trail against the wall. Try and keep the wall free of other objects so the rodents can use their highway in peace. Once the traps have been used a couple of times, sprinkle them with anise oil to disguise their odour.

Other effective baits are a mixture of honey and peanut butter, bread, bacon rind and raisins. I've found fruit and nut chocolate very tempting to rodents, and it stays fresh a long time in traps in sheds awaiting the casually passing rat.

A rat bait that won't kill anything else is dried potato. It is too expensive to use for large rat plagues, but may be useful for small problems. Leave out bowls of dried potato, which the rats gorge on, and die when they take water.

If you don't want to kill your rodents the following trap is easy to set up. Take a large bucket, garbage bin or drum — the deeper the better. Place it under a bench or table. Put a ruler on the bench, so that half of it is on the bench and half over the bucket. Now put the bait on the suspended end of the ruler. The rodents run out to the bait and fall in the bucket. This trap can also be used to drown rodents, just half fill it with water. This is a slower death than conventional traps and more cruel. If you want a permanent trap, you need to attach a spring to the ruler, so that it will flip back when the rat falls off.

You do have the problem of what to do with the live rats later. The most humane solution is probably to shoot them, drowning is NOT humane; gassing them, or ask a vet for another fast method.

Best wishes,
Jackie

PS: The Pied Piper of Hamlyn was supposed to have used valerian root as well as music to lure the rats. Maybe what we need is more experimentation into a tune that really does lure rats.

Ins and outs of the compost bin

Dear Jackie,

I'm planning to build a compost tumbler out of an old drum. The free drum I've got is a petrol drum and is rusty inside. How can I make this drum safe? If using the drum is out of the question what would be a safe alternative?

With warm regards
Alison, Caulfield South, Vic.

PS: I couldn't work in a reference to wombats ... I tried!

Dear Alison,

The simple answer is yes and no, and I've no idea. Petrol residues will contaminate compost, though high pressure steam cleaning and detergent will remove most of them. Compost will also break down at least a part of the residue.

I'm also a bit worried about the rust - if it's rusty now, it's going to be a heck of a lot more rusty when you

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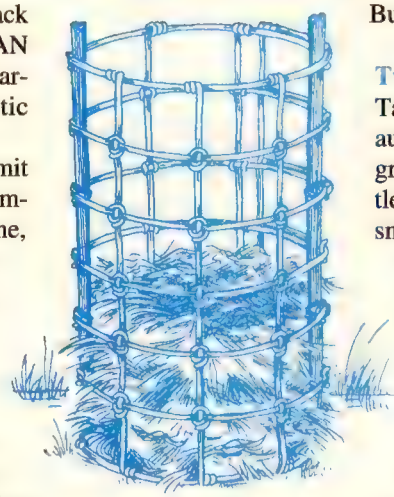
bung weeds into it and let them stand in it. The rust itself will just add a bit of iron to the compost. But if the drum collapses you may injure yourself - or if kids climb on it, they may even kill themselves and believe me, kids LOVE playing on compost tumblers.

Painting the inside and outside of the drum might work, as long as you sanded back the rust first. Fibreglass is safest. You CAN make a compost tumbler out of an old garbage bin, but then you may get plastic residues too.



Having said all that, I have to admit that I'm not a passionate advocate of compost tumblers. I've got a commercial one, which is supposed to make compost in two weeks BUT all ingredients need to be shredded and you need a lot of lawn clippings.

Compost tumblers add air and help drain off gunge and heat up fast in the sun, which helps the natural heating up process. If you have a rich Uncle Harry, try to coax him into giving you one for Christmas.

Lacking Uncle Harry, possibly the easiest bin would be made from builders' mesh. Fasten it into a roll by wiring it together.

Now put two star stakes into the ground, balance another on top - and thread the wire over the top one. Push the weeds into the wire roll. You can line it with fencing netting if you have very fine weeds or grass clippings and give it a few pushes every day to roll it over. If you want to speed up heating, drape black plastic or other dark material over it. This is not a safe or tidy compost bin but it does work.

Recipe for exceptionally stinky but effective liquid manure

1 part urine

1 part seaweed, comfrey leaves, nettle leaves or other GREEN and non stalky greenery, avoid gum-leaves, salvias, cabbages — things that smell strongly.

1 part manure

20 parts water.

Keep the lid on. Dilute to weak tea colour before you use. Avoid splashing on any body parts or eyes. Wash well after use. Remember, this is not sterile (it's about as non-sterile as you can get). USE WITH CAUTION. But my word, things grow when you apply it.

Two Week Compost Using a Lawn Mower

Take any (at least several) of the following: autumn leaves, animal manure, hay or straw, grass clippings, comfrey leaves, stinging nettles, borage leaves, green weeds. A very small amount of kitchen scraps, paper or old weeds can also be added. Shred them. The easiest way is to run the lawn mower over them several times.

Pile them in a heap in the sun, about a metre high and wide. Water with liquid manure, compost water or seaweed spray. Toss them round and pile again every day. Water with more liquid manure. The pile will start to heat up in a day or two but won't 'burn' because it is constantly tossed and moistened. (Don't leave it and trot off on holidays — you may come back to find a pile of grey ash.) It should be ready in a fortnight.

Growing and using soybeans

Dear Jackie,

I am interested in growing soybeans. I have 'The Earth Gardener's Companion' which gives some recipes but I can't find how to grow them. I live about 80 kilometres from Perth with very sandy soil and limestone. I have never seen them growing so have no idea about what they do. For soy milk do I use fresh or dried beans?

I am in my early 50s and use soy products instead of HRT to help minimise menopause symptoms (no hot flushes since increasing my use of soy products 18 months ago).

Yours sincerely,
Margaret, Mandurah, WA.

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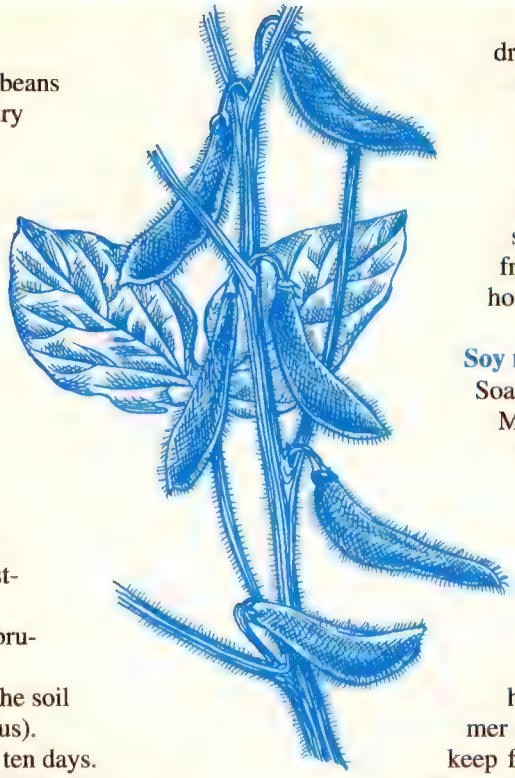
Dear Margaret,

Soy beans grow just like bush beans but as the beans are mostly used dry they take longer to mature than if you were picking the pods green to eat. ALL beans can be picked young and eaten. You can also keep all beans until the pods are dry and keep the seed dried for ages. You can also eat the seeds inside beans that are a bit too old to be tender but not at the dried stage — they are much sweeter and more tender than 'real' dried beans.



When to sow

Tropical areas: February to October.
Sub-tropics: All year round in frost-free areas.
Temperate areas: September to February.
Cool: October to January (or when the soil temperature reaches 16° to 20° Celsius).
Time Taken to Germinate: Seven to ten days.
Time until your first FRESH bean: Eight to ten weeks; you will need another six to ten weeks to let them get to the fat dry stage.
In your sandy soil you'll need to **mulch beans right up to the bottom leaves** to promote root growth along the stem.

Harvest

Leave the beans on the bush till the pods are dry AND THE BUSH IS DRY TOO, then uproot the whole plant and bash it against a wall so the beans fall out on old newspaper on the ground. Gather the beans and keep them dry, away from light.

Pepper or Garlic Beans

These are far superior to peanuts — crisp and addictive.

Soak dried soya beans overnight in a mixture of one cup water to a dessert spoon of honey. Take them out and dry them. Fry them till nearly brown in oil. You can either add a little garlic to the oil or sprinkle the beans with cayenne pepper when done. When they are brown they should be crisp without being tough. Store in a sealed jar till needed. If they go soft fry them for a minute or place them in a hot oven until they are warm.

Soy milk

Soak your soy beans for at least 24 hours. Make sure the water is hot to begin with. Drain. Now take one cup of beans, place in the blender and add two cups of boiling water. Blend. Squeeze through a sieve while they are warm.

Cows' milk has lactose — milk sugar. You may need to sweeten your soy milk. Add a little honey or syrup or sugar. If you simmer soy milk for three minutes it should keep for at least a week, if not two in the fridge. (Toast the solids in the oven until crisp and use for muesli, if you drizzle them with a little honey first they are delicious.)

The same recipe can be tried with almonds. It's not necessary to remove the skins, although you get a slightly less bitter, better flavoured milk if you do.

Soy Cheese

500 millilitres of soy milk makes about 50 grams of cheese.

Place three cups of soy milk with one teaspoon of lemon or lime juice in a warm place (not the sun) until they turn sour and thicken. Put the curds in saucepan and cover with cold water. Bring to the boil, then strain out as much moisture as you can and press well to get out every last drop. Place in cheesecloth or a clean teatowel and hang in a cool place overnight to firm the cheese. You can add salt, herbs, chopped garlic, chilli, for example, to flavour it before you

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hang it up, or a little calendula juice to give it a rich yellow colour and make it look more appetising.

Soya Flour
Dry soy beans then grind them until powdery. You can replace up to one-third of the plain flour in most recipes with soy flour for extra protein and health benefits.

Soy Noodles
Mix two cups soy flour with two egg yolks and enough iced water to make a dough. Knead well and leave in a cool place for an hour. Roll out as thinly as you can, then slice off very thin pieces. Toss these in boiling water, not too many at a time and cook for about five minutes.

Soy Bean Curd
Take two cups of soy flour and add eight cups of cold water. Leave for half an hour, stirring a couple of times. Transfer to a pot, bring to the boil, keep stirring or it will stick on the bottom. Take off the heat and add three tablespoons of lemon juice at once. Keep stirring. Cool (don't chill it in the fridge). Line a colander or sieve with cheese-cloth or even a tea towel. Tip the mixture in and leave overnight. Store bean curd in the fridge when it is set, covered with water.

Marinated tofu
Place tofu in the following marinade for at least an hour. Ingredients: three tablespoons dry sherry, Chinese rice wine or sake; half a cup tamari or light soy sauce; two tablespoons sesame oil; two tablespoons white wine vinegar; two tablespoons grated peeled raw ginger; two tablespoons chopped chives or shallots or the white part of spring onions; optional, one chopped red chilli; half a teaspoon honey. Serve marinated tofu by itself, or topped with toasted sesame seeds.

Medicinal soy beans
A diet high in bean curd has been associated with lower breast cancer rates, and other cancers. A diet high in soya products may also reduce MILD menopause symptoms but you must eat it regularly and don't expect miracles.

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In one study by the University of Washington, half one cup of dried beans per day (cooked) reduced triglycerides by 17 per cent; half a cup of cooked beans a day may lower cholesterol by an average of ten per cent. Swapping meat for bean curd reduces the risk of kidney and gall stones. Beans help regulate blood sugar levels.

Beans are high in the trace element manganese and may help reduce bone loss with osteoporosis. Beans are also provokers of flatulence extraordinaire, but if you eat a lot your gut gradually gets used to them

Rose recipes for Enid and Maria

Here are a few rose recipes for Enid of Garran, and Maria of Nimmitabel. And remember:

- Never use roses sprayed with pesticides or fungicides;
- Generally the more fragrant the rose, the better its flavour but this can vary enormously;
- Cut off the bitter white bit at the base of rose petals before you use them.

Rose water
This can be used as a perfume, or to flavour cakes, ice cream, icing, biscotti, whipped cream . . .

Cover fragrant rose petals with vodka, just enough to cover all the petals. Leave in a dark place for a week; strain; repeat with more rose petals until the vodka is strongly flavoured. This may be with one lot of petals or 20 or 30, depending on the variety and the season.

Crystallised Rose Petals
Take deep coloured fragrant petals, perfectly dry. Dip them in beaten egg-white then in castor sugar. Dry them in an airy spot and store between greaseproof paper in an airtight tin.

Serve them with after dinner coffee, to garnish cakes or ice cream or yoghurt or just by themselves.

Rose Fool
This will have the colour of whichever rose you choose as well as the scent and flavour. It is subtle, clear and wonderful.

Ingredients:

4 tablespoons rose water, using the recipe above
juice and finely grated rind of one lemon
4 tablespoons castor sugar
2 cups cream.

Whip all ingredients until they are firm and light. You may wish to add more sugar or a touch of lemon juice, according to taste. Whip again and refrigerate until you are ready to serve. Decorate with fresh or candied flowers.

Rose Ricotta Bombe
Serve this on a bed of grape leaves to eat with water biscuits, or serve sliced with thick fresh cream

Ingredients:

500 grams of ricotta cheese
1 tablespoon candied angelica, chopped

juice and finely grated rind of 1 lemon or lime
2 tablespoons rose water, us ing recipe above
castor sugar to taste.

Mix all ingredients well, and tip the creamy cheese into a clean tea-towel and hang overnight. Unwrap it just before serving, it will be round and firm and slice well.

Whole Roses in Syrup

Take clear, pale honey or white sugar, add as little water as possible while you heat it to a thick syrup. Boil for two minutes, pour (still boiling) over small, open roses placed in a jar. Seal and store in a dark, cool place for a month.

Pickled Rose Buds

These can be eaten like olives or used instead of capers. Try a few slices added to a salad sandwich.

Ingredients:

rose buds
sugar or honey to taste
white vinegar.

Place the buds in a jar, sprinkle on some sugar or honey and cover with boiling white wine vinegar. Seal and store in the fridge.

Rose Jelly

Ingredients:

1 cup boiling water
2 tablespoons sugar
1 tablespoon lemon juice
1 tablespoon gelatin
2 to 20 cups of rich red rose petals
1 tablespoon extra boiling water.

Pour the water over two cups of petals, sugar and lemon juice; leave until tepid and strain. Taste. If insipid, and it may well be, you will need to repeat this with more rose petals until it is fragrant.

Dissolve the gelatin in the extra boiling water, and add to the red dyed water. Leave in a cool place until it was set. This jelly can be made richer by adding chopped pistachios, slivers of glacé fruit or a very small quantity of well-chopped orange or lemon peel, candied or fresh.

Rose Petal and Lemon Blossom Preserve

This is more delicate than marmalade, rich red and subtle.

Ingredients:

10 cups rose petals, chopped
8 cups sugar
the juice of three lemons.

Cover the flowers with sugar and leave overnight. Pour off the sugar in the morning, it should be semi-liquid as it will have absorbed the oil and juice of the flowers. Add the lemon juice and a little water, bring to the boil, add the flowers and cook until a little is thick in cold water. Pour into jars and seal.

• ***Check out Jackie's new website. The address is: <www.ozemail.com.au/~jackiefrench>***

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WE BUILT A DAM ON SAND

Are the rainy seasons less abundant than they used to be? Or is it just that the garden has grown? Whatever, nothing solves a water problem like a dam.

by Jose Robinson
Wild Cattle Island, Queensland.

AS our dry seasons seem to be becoming longer and drier, we've mulled over the most economical way of storing extra water, mainly for garden use.

As we live on a tiny sand island away from the luxury of mainland piped water supply, and in a dry belt of 800 to 900 millilitres of rain annually, water is always at a premium.

When we first moved to the island 18 years ago, the rainy season seemed to be more abundant. Or was it just that I didn't have such an extensive garden?

Desalination could be a solution if we received our power from the grid. But we have to rely on the sun and wind for our energy system. Although we have the ocean all around us, desalinating salt water is too energy expensive and inefficient to be able to operate a system with our 18 solar panels and wind generator. So this year, we decided to take the plunge and build a dam with a liner.

For obvious reasons it had to be a fairly small dam, but we felt a small dam would be better than no dam.

To do the excavating ourselves, we only had an old Fergie tractor and bucket, but we figured it would be up to the job if we were! After all it was only sand we were moving. We measured and marked out our boundary using a string line and hammered the pegs in. I dug out copious amounts of turf to be used elsewhere on the property, and then the real work began.

After several sessions of tractor work, we began to get bogged each time we tried to go deeper. The work looked like becoming dangerous. We were almost half way to the desired depth when we had to sit down and have a big think about the danger of using the tractor. We borrowed a back blade from a friend. It moved the sand faster but it was still dangerous.

Jose fills in the trench around the dam.

We have a few weekend holiday houses on the island, and as luck would have it, some of the house owners decided to throw in together for the expense of getting a backhoe down to the island to do some levelling. So we joined in and were able to hire the backhoe for an hour, which finished off our excavating.

We checked the cost of commercial, fabricated liners and got quotes from two companies with several hundred dollars difference in price — and quality. Ultra-violet rays can be a big problem with liners and their durability. The liner we got was guaranteed for three years, and made from Canvacon 5000.

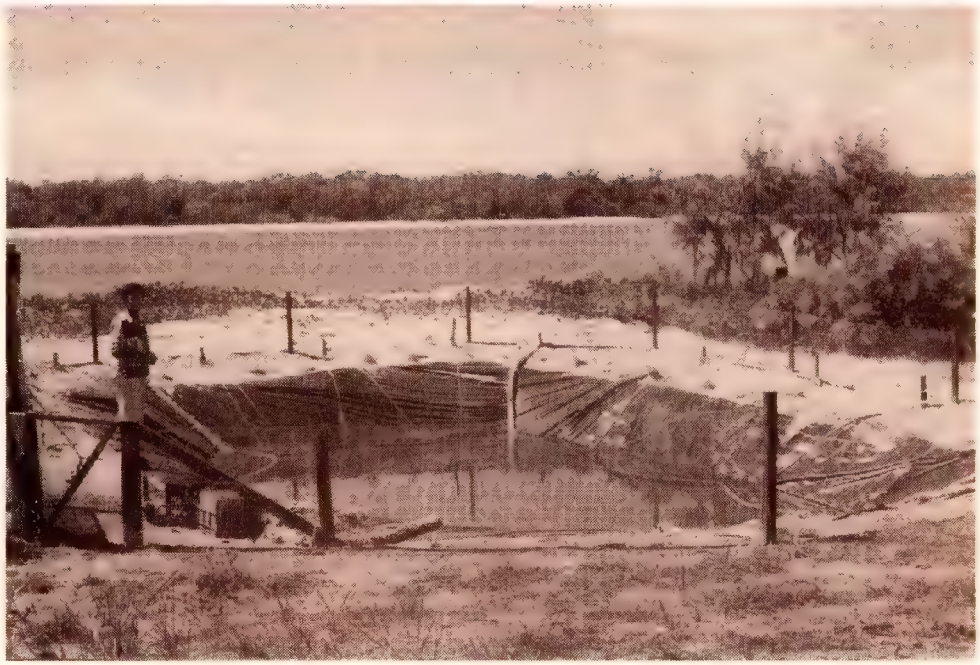
This is a type of woven poly fabric. It is said to give incredible resistance to puncturing and tearing. They promised delivery within a week, and we collected the liner just five days later. We didn't want to waste any more time with the promise of the last of the season's rain. The liner came in a flat rectangular piece, so we had to pleat the corners to get a snug fit. This we did with the help of our trusty brick weights. These prevented the liner from taking off like a giant sail in the breeze. I had sewn dozens of bags made from old curtains to enclose the bricks, in case some sharp edges punctured the precious liner.

To secure the perimeter we dug a trench all around, approximately 45 centimetres' depth, and the width of the spade. We buried the edges of the liner and finally placed a layer of builders' black plastic completely over the side walls. This was to protect the liner from the ultra-violet rays. The floor of the dam liner we covered with a thin layer of sand.

By now all chance of rain seemed very remote and reluctantly we became resigned to having a dry dam for months to come. Several of our friends, upon inspecting

our work muttered, "you'll not get any water in that until next wet season". But whatho! Our luck was in. A few days later, Cyclone Justin began hovering off the north Queensland coast. He was a most unusual cyclone. He moved down then up, then in and out. Being so late in the season, we thought it would be a fizzer. He travelled quite fast down near us dropping masses of rain mainly north of us, completely ruining many of the banana plantation crops.

We got our fair share, and soon our new dam was about one-third full. We busied ourselves and acquired some waterlilies planted in pots to float on the surface. The pots were inserted in cut-outs of polystyrene circular floating supports. Naturally waterlilies won't grow on a plastic-lined dam bottom, so we had to be innovative and make these float. A couple of silver perch were then introduced to keep down mosquitoes.



One completed dam, half-filled with water.

We have toads which have to be seen to be believed. We weren't wanting to provide them with a free breeding area, so up went a bird-wire fence surrounding the dam. This fence worked very well, and apart from the few that went swimming before the fence was secured, we've had no toads since. We scooped out those few and sent them packing.

To save any excess storm-water which may overflow from our water tank, we have set up an underground poly pipe system to direct that overflow into the dam.

The next project has been to set up a water pumping station from the dam to the vegetable gardens. We purchased a 12 volt Johnson 12 millimetre (1/2") pump with a maximum draw of three amps. It has a constant rating which means it can run indefinitely. We built an adjustable stand for one 40-watt solar panel. This panel can be adjusted for the summer or winter sun. We also installed a maximiser which allows the pump to operate from the solar panel without going through a battery. The maximiser also converts the excess voltage from the solar panel (over 12 volts) into usable amperage.

We are still ironing out the practicalities of the best size of poly pipe to carry the water to the garden area — a distance up a small rise of about 50 metres. There is plenty of power and water force through a 12 millimetres (1/2 inch) poly pipe and the energy for it is free from the sun. We're currently experimenting with a larger size poly pipe for an even bigger flow of water to the garden system. Everything is working very well and we are happy with our new dam. When full the dam will be about 14 metres by eight metres by 2.5 metres.

Costs:

Hire of backhoe to complete excavating	$100
1 roll builders' black plastic	$80
1 roll bird wire by 900 millimetres	$80
Dam liner from V.P. Industries, Brisbane	$823
Posts for fence (scrap on hand)	nil
Nails to secure wire (on hand)	nil
12 volt Johnson 12 millimetre pump	$150
Maximiser (on special)	$50
1 by 40 watt solar panel (we took this panel from our existing solar system)	nil

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Seakale From The Sea Shore

Found on the coasts of Britain, Ireland and France this relative of the wild cabbage has been cultivated for centuries.

by Keith Smith
Birchgrove, NSW.

SEAKALE (*Crambe maritima*) is a perennial brassica with long leaf stalks that are made white and sweet by blanching and cooking like asparagus. Unblanched seakale looks like a small, open cabbage with purple leaves and stalks and it is too bitter to eat.

Seakale may be the nearest relative to the original wild cabbage (see *These are a few of my favourite choux*, EG104) and is native to the coast of Britain, Ireland and France. John Gerard in his *Herball* (1597) said he had found "sea Colewoort" growing near Whitstable (Kent) and Colchester (Essex).

"Sowed a large bed of sea-cale, which I brought from the South-hams of Devon," wrote Gilbert White, celebrated author of *The Natural History of Selborne* (1789) in his garden journal on 6 April, 1751. In this White was a pioneer, because seakale was not generally cultivated in British gardens for another 50 years, though country people cut off the tender stalks (below the soil) from plants gathered in the wild.

Growing seakale was promoted in Britain by William Curtis, founder of the *Botanical Magazine*, who published a pamphlet, *Directions for Cultivating the Crambe-Maritima, or Seakale, for the Use of the Table* (London, 1799), and sold seeds at his nursery at Lambeth Marshes in south London.

Until the outbreak of World War I in 1914, seakale (chou marin in France) was mainly raised in the vegetable gardens of the British 'landed gentry', who left the fiddly business of growing and blanching the plants to their household staff.

When blanched, seakale stalks are crisp and brittle, with a pleasant cabbagy taste. They are steamed or boiled in salted water and served on toast with butter, or with a cheese sauce. Cut stalks into thin strips for salads.

Growing

Originally a coastal plant, seakale prefers deep, rich, sandy or loose soil and plenty of sunshine. It does best in cool to warm temperate climates.

You will need plenty of time and patience, as seakale plants take two or three years to mature from seed, or just one year if started from advanced shoots or 'thongs' (not the kind you wear to the beach), or more advanced 'crowns', which you might be able get from another gardener. However, any piece of root cutting will grow into a plant.

Prepare the soil by digging in finished compost and a handful of lime or dolomite to the square metre. Start seeds in pots or sow 30 centimetres apart in nursery beds in spring. Allow one metre between plants when setting out the following autumn.

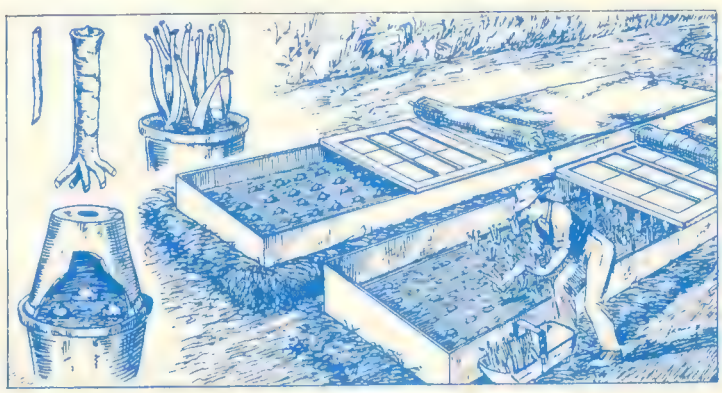
In Britain, gardeners side-dress seakale with a sprinkle of salt or wood ash. Fish or seaweed manure, or a seaweed mulch, is probably a better choice.

Before blanching, plants must still grow on until they develop a crown, which takes a further year.

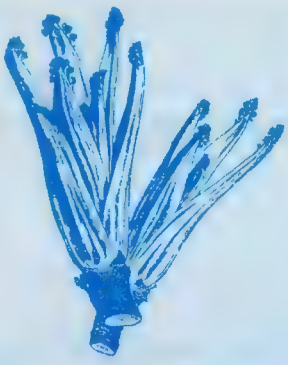
Blanching

Thomas Shepherd, proprietor of the Darling Nursery, claimed in his lectures at the School of Arts, Sydney, during 1835 that he was the first person in England to blanch seakale in a hotbed frame during winter. This method, he added, "enables a gardener to supply his master's table in this vegetable all the winter, at scarcely any expence."

Shepherd 'forced' the growth of seakale under glass-covered frames over a mound of fresh animal manure and hay to provide heat.



Forcing seakale in glass frames over hot beds. Showing (top left) a prepared root cutting or 'thong', trimmed crown and blanched seakale in pot and (bottom left) potted crowns ready for forcing in a heated greenhouse.
— *French Intensive Gardening*, Glasgow, c. 1930.



Blanched seakale — *The Book of Asparagus*, London, New York, 1901.

'The Sea Colewort [seakale] is now preferred by many as an esculent to most of the spring productions. It has not been many years introduced into the garden for kitchen use, but has been long known to the inhabitants who live near the sea, where the plant grows naturally, and who gather it in spring as soon as ever, or before, it comes up . . . and being cut so early they are of a more delicate sweetness.'

— Reverend William Hanbury, A Complete Body of Planting and Gardening, London, 1770.

Traditionally, seakale was blanched in the open under special forcing pots, such as 'Pascall's Patent Sea-kale Pots', which excluded all sunlight.

More simply, plants may be covered where they are growing with 10 centimetres of earth or with large ceramic garden pots or wooden boxes. Seakale may also be lifted and 'forced' indoors in a box filled with fine soil and covered by sacks.

As they blanch, stalks flatten, whiten and develop a fringe of leaves at their tips. Cut off shoots and leaves when they are ten to 15 centimetres long. Plants can often be cut two or three times in a season.

Varieties

'Purple' has blanched shoots with a tinge of purple at the tip, but 'Lily White' shows little trace of purple colouring. 'Ivory White' is a hardy old variety, which is bulkier than 'Purple'. 'Beddard's Improved' is said to be less vigorous than 'Ivory White'. 'New Bohemian' and 'Pink-tipped' are other named varieties to look for.

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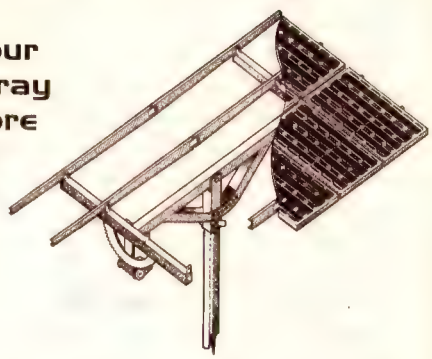

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From Spade To Blade

Gary Thomas' Garden Recipes

It's possible to find that vital ingredient, the real thing, in the most unlikely of places.

AUGUST 1998 and I'm thumbing through some books on regional Mexican cookery for a catering project at a regional school. One sprig of epazote, says one recipe. Cook the beans with a sprig of epazote, says another. Don't use the dried version, it's not worth it, says a third. Better find out a bit more about this I think, so I reach for the nearest glossary.

EPAZOTE: The herb *Chenopodium ambrosioides* is one of the pungent herbs used extensively in the cooking of central and southern Mexico . . . to cook a pot of black beans without it is unthinkable . . .

A vital ingredient. Poop. We're trying to be authentic to a theme and this book tells us we're short of a vital ingredient? I spend a day searching madly for a central Mexican herb growing freshly in a Central Victorian town near the end of a frosty, snowy winter. Yes, in hindsight, a day less wisely spent.

I consult more widely. I use the Internet and discover I can substitute fresh sage but it won't really be quite right. I am relieved just the same. We have maintained our strive for authenticity. We have not substituted Worcester Sauce or beef gravy and to my uncultured Mexican palate the beans taste sublime. However, I trust my good book learning, so I place this allegedly indispensable herb on my List of Plants to Get.

Cut to my local market last summer and a man selling all manner of interesting and unusual plants. Ahh, would you have epazote, I ask. Why, certainly, he replies, and for a very modest fee I carry home a small pot of epazote and plant it under the drip line of our mulberry tree, a space pleading to be filled with an unthinkably necessary Mexican herb. It is now a flourishing young bush heading into seed.

Pot beans

Rinse half a kilo of black, pink or pinto beans in cold water, drain then cover with enough water for the beans to double in size as they soak overnight.

Alternatively, bring beans to the boil, bubble for ten minutes then let the beans sit in the hot water for one hour before proceeding.

Finely slice one large onion. Heat a large cooking pot, add two tablespoons of oil, heat gently then toss in the chopped onion. Shake in one tablespoon of salt or to taste. Fry gently until the onion is soft and translucent but not brown. Add two tablespoons of butter. (I do this as a substitute for the traditional pork lard). Drain the beans, add to the cooking pot and toss thoroughly to mix the butter and onions through. Add enough cold water to rise three centimetres above the level of beans in the pot.

Bring to the boil then simmer gently for 90 minutes or until the beans are soft. Check and stir occasionally, making sure the level of water remains just above the beans. Top up if necessary. A few minutes before the end of the cooking time, add one large sprig of epazote. A pot of beans without it would be unthinkable !

I'm one of those people who likes to set themselves little challenges each growing season. This year it was the Red Kuri pumpkin, a beautiful if temperamental beast. Using seed saved from last year's successful effort, I struck 25 odd little seedlings. One after another they got sulky and died. The coroner's report was inconclusive. Three hung in there, cosseted and pampered and finally planted with lots of post-establishment care, providing us with a small number of exquisite fruit. Not an item of this fruit is being wasted.

We are in raptures over its visual beauty, we are steaming and stuffing and baking its sweetly delectable flesh and we are using the seeds to make pepitas. Sometimes we use the pepitas to make molê, a generic term to cover the different types of Mexican seasoning sauces made to this method.

Pepitas

Remove seeds from any type of pumpkin and remove stringy fibres. Rinse, pat dry, spread in a single layer on a baking tray and bake in a moderate oven for 30 minutes. Add half a teaspoon of (preferably) peanut oil and stir to coat the seeds. Roast for 30 minutes more or until the seeds are golden and crunchy. Sprinkle lightly with salt to taste. Pepitas will keep well in an airtight container for several weeks. These seeds contain oil so it is better to let them cool before grinding in a bladed machine.

Molê verde

This recipe calls for the use of tomatillos, a type of Mexican tomato often used green. It's not commonly available so you are exceptionally clever if you have some. Alternatively, use regular bottled tomatoes.

Take three tomatillos; half a small onion, roughly chopped; one large garlic clove, coarsely chopped; half a cup of water; one-third of a cup of toasted pumpkin seeds; four medium poblano chillies, roasted, peeled and seeded OR any available green chilli; one large lettuce leaf, shredded; a quarter of a cup of coriander leaves, and oil.

Place the tomatoes, onion, garlic and water in a heavy cooking pot, bring to the boil and simmer for ten minutes. Blend two tablespoons of this cooking liquid with the pumpkin seeds. Add the chilli, lettuce, coriander, salt and remaining tomato liquid. Process until smooth. Heat a couple of tablespoons of oil in a frypan. Add the purée. Stir over a medium heat for five minutes or until the bright green lustre has departed.

A million ways with rice

Mexican white rice is rinsed and well drained. It is placed in a heavy pot on top of some hot oil over a medium to hot flame. It is regularly stirred and turned for about ten minutes in order to toast the outer hulls of the rice. Sometimes a little chopped onion or garlic is added. Then follows the absorption method of cooking in an open pot. After the liquid is absorbed, place a heavy lid on the rice, keep warm and allow it to steam 30 minutes whilst preparing the rest of the meal. Serve with pot beans, molê verde, extra pepitas or toasted sesame seeds and tortillas.

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A Homemade Window On The Stars

Anyone can build a telescope and have the means to travel in time and explore exquisite beauty. Rhonda describes how and why she built her own telescope for a little time travel.

by Rhonda Martin
Coonabarabran, New South Wales.

I SAY time travel because when we look at light, we are looking into the past — sunlight is eight minutes old before it reaches us, moonlight (which is really reflected sunlight), 10 seconds old.

Now, there is nobody more ordinary or everyday than I. The Anglo-Australian Telescope, Coonabarabran, in north-western New South Wales, employs me as their Administration Officer. Administration is pretty much the same anywhere but the sheer ambience of this place, and a basic interest in the sky anyway, along with the presence of several enthusiastic amateur astronomers, worked subtly on me for a few years.

One icicle-filled night I saw Saturn through an amateur's telescope and suddenly I felt it would be great to actually do it: make something that would give me a glimpse of what the big telescope upstairs could see.

Being totally cloth-headed about things mechanical I consulted my friend, the engineer, who is one of those above-mentioned enthusiastic amateurs and who had already built a couple of telescopes. We, or rather he — because I really didn't have a clue — decided I would have a go at a 200 mm (eight inch) Newtonian telescope on a Dobsonian mount. Got that? Great, because I didn't, but I did learn.

Rhonda Martin with her spectacular homemade 200 mm Newtonian telescope.

Telescope jargon

The 200 mm refers to the diameter of the mirror and is a good size to first venture into our solar system. What I didn't realise was the magic I would meet there. Knowing I was a bit dim (well, very dim actually) about this sort of thing, we decided to take it one step at a time. This was to be a reflecting telescope as opposed to a refractor. Instead of buying one ready-made (heresy when you work where I do) I purchased a mirror blank, which is a lump of pyrex cut to size and which has to be ground (shaped) and polished then coated with aluminium. Easy, thought I. Talk about hen-witted.

The blank duly arrived. I also bought various grades of grit, from 80 grade (80 pieces per inch) to 1500 which is like talcum powder, and I was introduced to the mysteries of mirror grinding. Let me tell you, it takes time. (It is terribly important

that it is done properly. The mirror is the heart of any telescope and if the shape is wrong, your telescope is not worth worrying about.) It amazes me that two flat pieces of pyrex ground together in a certain manner can produce a concave shape in one (which becomes the mirror) and a convex shape in the other (which is then a tool). Here again I was fortunate that my friend, having ground a 200 mm mirror already, had a tool to hand which he had coated with metal washer dumps. This tool made it a lot easier, and quicker.

Grinding the mirror

I filled a 44 gallon drum with water for stability and used a simple wooden gadget to hold the mirror firmly but still let it revolve. Hogging out, a very elegant term I always thought, happens rather quickly and it is a thrill to see the dip appear in the pyrex, which is still cloudy at this stage due to the crystals being mashed by the coarse grit.

The novelty of all the grinding wore off more quickly than the bits of pyrex. But the effort changed from being a chore to becoming a very satisfying piece of work — something to be done well. I settled down to about one hour per night of grinding. Once I'd reached the required depth I had to change my angle of attack, shaping to the edge, by using a different stroke, changing to ever finer grit. When it came to the stage where household dust could damage the work I brought it up to the Observatory.

Next came the aluminising. Then finally, the pyrex — now crystal-clear — shaped and polished to the very best we could achieve, was full of promise. It has never failed in that promise. The gleaming mirror that I reverently placed in its carry box was a thing of beauty, ready to reflect the heavens.

Telescope tube

Once the mirror was finished I needed something to house it all in. Tubes can be made of several things. Stormwater pipe was too heavy and I knew nothing about fibreglass, but having seen how effective my friend's

Rhonda has celebrated the cosmic nature of her homemade telescope with these wonderful decorations.

square tube was, we settled on plywood. I purchased a sheet of six mm ply, hefted my trusty jig saw and began to cut. There is an esoteric exercise where the focal length of a mirror is calculated and mine is 1336.5 mm. The mirror itself is f6.7, which is classed as medium speed in light gathering ability.

My friend, being sort of handy around a workshop, made my focus ring and mirror clips and all the other metal bits including the spider which would hold the diagonal mirror; this mirror bounces the light reflected from the main mirror to my eye via an eyepiece. These metal

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fitments, as well as the inside of the tube, are painted matt black to remove reflections.

Before the fourth side was fitted, all the fixtures and fittings were added. These included the spider and the main mirror cell.

The telescope then needed a mount so that I could swing it easily as I worked. I was getting excited by this time and happily glued and screwed on the trunnions which would give a smooth ride.

For the base of the mount, I cut radiata pine into a triangle with each end extended to take the jacking screws used for levelling. For the tracking plate, on which the telescope sits to move, I used an old chipboard table. We used 12 mm ply for the mount.

First light for the first sight

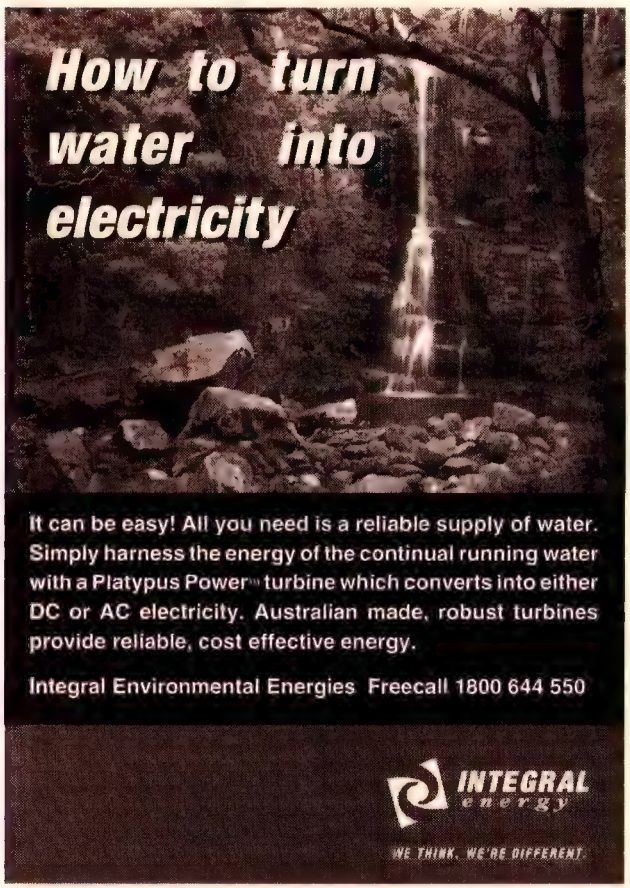
First light was just before Christmas in 1997 — somebody had swapped me a finder scope for a dozen bottles of wine — and once this was aligned, all was set. What I found first was the moon! Using a 6.3 mm eyepiece, I could hardly fit any of it in so in went the 26 mm and there she was in full, eye-blinding glory. I searched for a planet and for the first time through my own telescope saw Jupiter and its four Galilean moons. I had saved Saturn until last and hoped like mad that it lived up to my memory — it did — the rings of Saturn are stunning!

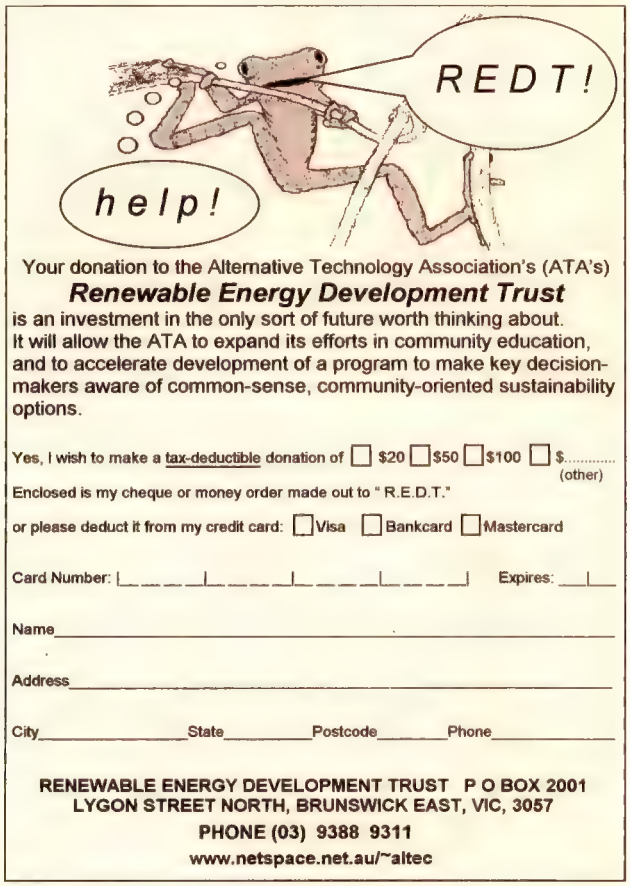
Tips for building your own

From all of this it would seem that I had a lot of specialist help, which I most certainly did, but there are astronomical clubs everywhere and they are always pleased to help and instruct.

Probably the most expensive items are the optics. There is no point in buying cheap eye pieces, particularly if you have gone to the trouble of making a super mirror. Finder scopes are not all that expensive and are just what they purport to be, a finder. I have three eye pieces which give different magnifications. The most 'powerful' is the 6.3 mm which gives vast magnification. The most used is the 12.5 mm but to get the full moon, I use the 26 mm. They cost me $83 each two years ago and cover a good range. The diagonal mirror cost me $75 at about the same period. This telescope cost me about $650 — far, far cheaper than you can purchase in a shop. Plans for telescopes are readily available at libraries, or telescope and binocular shops.

With the longer nights coming along, I rather think my 'scope will be out on the hill again and I will once more be mesmerised by the glories of Omega Centauri, Saturn, the Jewell Box, and Venus, and Jupiter and . . .





A Day at Drepung

This Tibetan monastery was founded in 1416 and damaged by the Chinese Army and Red Guards after the invasion in 1951. Its magnificent mudbrick and rammed earth buildings are being restored in traditional style.

Drepung was filled with Tibetans making their devotions and adding to the butter lamps.

by Irene and Keith Smith
Birchgrove, New South Wales.

WE spent nearly three weeks in Tibet in mid-1998, fulfilling a long-held ambition. We had a spectacular flight to Lhasa from Kathmandu following the high mountain peaks of the Himalayas, with Mount Everest poking through the clouds, just off our left wing tip, or so it seemed.

We stayed a few days in Lhasa, getting used to the high altitude (3590 metres) and visiting the Potala Palace (home of the Dalai Lama), the ancient Jokhang monastery (founded c. 639-647 AD) and the Barkhor market area, which remains the core of Tibetan life.

Everywhere, we saw the beautiful Tibetan people, who are always praying, smiling and laughing, despite the heavy hand laid on their country by the occupying Chinese. Everywhere, we saw imported Han Chinese people and soldiers, who now roughly equal the number of remaining Tibetans.

On the positive side, the Chinese contribution to Tibet has been better roads and electricity. On the deeply negative side, we saw a rash of tasteless concrete buildings in Lhasa and, everywhere, grafted-on 'modern' clubs and brothels. This is the way they are trying to smother traditional Buddhist culture.

Drepung, one of the biggest Gelupka (Virtuous School or 'yellow hat' sect) Buddhist religious centres, is only eight kilometres west of Lhasa. It was founded in 1416 by the lama or spiritual teacher, Tsongkhapa. When we saw it, Drepung was filled with local Tibetans making their devotions and adding to the butter lamps in front of holy images and tombs. These days they use Indian ghee rather than yak butter because it's cheaper and they would rather eat the yak butter.

Once there were 8000 monks in an assembly of colleges (each with a head abbot) in a self-contained community at Drepung. Now there are only about 500 monks there, who are only able to perform the tasks allowed by the Chinese authorities.

Drepung is typical of the monasteries we saw on our trip. It is one of 6000 that were damaged or destroyed by the Chinese Army and Red Guards in Tibet after the invasion in 1951. Its magnificent mudbrick and rammed earth buildings are being restored in traditional style like all the monasteries throughout the country.

This happy old monk at Drepung eagerly ate two lollies that Irene gave him. He refused more, pointing to his mouth, where only one tooth was left!

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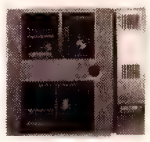

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A Chemical-free Termite Control

New-born babies in Townsville are producing poo that has traces of chemicals used to kill termites. But there are alternatives.

by John Broomhead
Townsville, Queensland.

IS there an answer to large doses of chemicals sitting under the home to control termites? These chemicals can cause the home to become toxic, which is commonly known as sick building syndrome. Australia pours about 275 million litres of chemicals on the ground each year to kill termites — that's enough to poison 25 per cent of the water on the Great Barrier Reef in one year alone.

Australia pours about 275 million litres of chemicals on the ground each year to kill termites. That's enough to poison 25 per cent of the water on the Great Barrier Reef in one year alone.

Since 1995 many chemicals have been banned from use as termicides, and the remaining termicides being used are much weaker and need to be resprayed each year. The cost of respraying alone could be as much as $40,000 over the life of the home and take about 7225 litres of chemicals.

Local councils in the eastern states such as Ku-ring-gai Municipal Council are leading the way by encouraging the use of non-chemical termite protection. The small town of Kenilworth in the Maroochy Shire Council area is taking that step further by requesting the town be made free of herbicides and pesticides.

According to Dr John Whitehall, the director of neonatology at Kirwan Women's Hospital in Townsville: "samples from local babies showed traces of chemicals used in termite killers, scabies treatments and sugar cane pesticides". It is worth noting that 45 per cent of the newborn babies tested showed some level of contamination.

Townsville is not an agricultural centre and these chemicals should not be showing up. What is so appalling about this research is that a Townsville manufacturing company, JOSU Corporation, leads the world in chemically-free termite control.

A spokesman said the JOSU Termite control fittings can be installed in any plumbing or electrical system and by building the concrete floor to the Australian Standard AS 2870. This then gives the best protection available for the whole building.

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We Gotta Get Out Of This Place . . .

There are many roads to a quiet country life. Here Barry Traill talks of the revelation that led from the Salvation Army to the bush.

by Barry Traill
Chiltern, Victoria.

Barry and Cassia outside what Barry calls their 'ugly' Melbourne house.

IT WAS the Salvation Army who finally made us leave the city. In June of last year I was hunched at the bus-stop coming home from my job in the middle of Melbourne. It was a classically murky and cold Melbourne evening. I was in a foul mood. It was smoggy, I'd had a shitty day at the office, there was still a certain Premier in charge of Victoria, woodchipping of forests and clearing of woodlands was going on at a massive rate, and then there was the Greenhouse effect, the bloody bus was late etc etc etc.

And then the Salvation Army bloke turned up at the bus stop. A week before I'd met this bloke on the same bus on an evening when I was more in love with the rich diversity of the world. We had got talking. He was on his way home after reading gospel in the city. We ended up having one of those fairly simplistic conversations about religion that people who are strangers have. I discovered he believed that Satan existed and he discovered I was a Buddhist. He was a nice bloke but I could see it was a relationship that wasn't rushing to a destination. We had got off at the same stop and it turned out he lived in the next street from me.

But a week later, on this dreary night, I was feeling very anti-social. I didn't want to talk to strangers, even if they were from the Salvation Army. So I did what any blue-blooded, introverted Anglo-Saxon Australian does when faced with a social dilemma — I went up the back of the bus and hid behind a newspaper.

But then came one of those little conversations in your mind (well my mind anyway) that goes something like this: "Damn, he'll get off at the same stop. Bugger, he's then going to walk up the street in my direction. We've talked before. I can't just walk past him, it's too rude to ignore him if he knows I've seen him. Damn, what'll I do? The bus is stopping now — I know! I'll jump off quickly and run around the back of the bus and get a lead on him!"

So I leapt out, ran out from behind the bus and went straight into a car.

Amazingly, I survived completely unhurt, despite bouncing off the windscreen. I even landed on my feet after sliding off the car. And of course, who was the first bystander on the scene? My nemesis — Captain Salvo!

However, nearly being killed seems to make you love humanity again. So after calming down the understandably distressed driver, we walked home together, me as happy as a lark and suddenly very chatty. The Captain suggested quietly that he had witnessed a special moment of possibly divine intervention. I didn't explain the social ineptness that had led to God having to intervene.

With its powerful mixture of athleticism (you try landing on your feet!) religion, flight, failure, and then deliverance I was sure that there was an important message being sent to me. After discussion with my partner Susie, and some vehement gargling from 12 month old daughter Cassia, I decided the message was obvious. God or Buddha, or ABS brake systems, was telling us that we needed to leave the city and go back to our country roots. Fortunately we had already been mulling on just such a move.

Making the break

But where to go, what to live in and what to live off? We both hail originally from Gippsland, in eastern Victoria, but much of our recent work as biologists and conservationists has been on the threatened drier woodlands inland of the Great Dividing Range. We eventually agreed that north-east Victoria was the go. Our parents had moved there in retirement and we had some friends and acquaintances in the region. This would also work in well with our planned work to help start and co-ordinate a national campaign seeking better protection for the woodlands country.

I would quit my job with Trust for Nature. This was a great job protecting bush on private land throughout Victoria, however, the job was based in the city. We would do consultancy work. I had done this before and it shouldn't be too hard to get enough dollars to live a simple life.

Below: Barry Traill and his daughter Cassia, swinging in a hammock in their new garden. (Photograph: Susie Duncan).

Above, from right to left: baby Cassia, Susie and Barry, with some of their new neighbours, Julian and Vito Conticchio.

That just left one question: exactly where would we live in the north-east, and on what sort of block?

Finding the block

We listed our preferences:

1. A large bush block, preferably on poor soil. Poor soil because they have far fewer weed problems — an important factor which is often overlooked by buyers. It's usually easier to buy poor land and make good soil for the garden than to buy fertile land and spend your life chipping thistles, broom and blackberry from the entire block. This is particularly important if you're going to be an absentee owner.

2. Near regular public transport to Melbourne. Our work would still take us to Melbourne a lot. The drive on the freeway sucks. A bus would be okay but the train much better.

3. Walking or easy cycling distance to a milk bar. This was my preference not Susie's. I'm lazy and like to have the comforts of life close to hand. Perhaps more importantly we wanted to have only one car and had no desire to buy two. As either of us could be away on work we needed to have a house and land that was close enough to the shops and childcare that the other person could get along without riding the bike for two hours a day.

4. Near a really large block of bush where we could go walking and look at the critters we were trying to save.

5. Land with a house that required minimal or no work to make it okay to live in and work from. This meant it needed to be large enough that we could have an office

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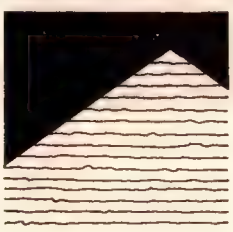

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separated from our darling daughter. Susie's longer term dream is to build a strawbale house. I am a lazy Earth Gardener: my dream is to never have to paint one, never mind build one. We decided to leave this thorny issue of house building to some future date.

Narrowing the choices

We were fortunate in knowing the north-east of Victoria well from our work doing wildlife research in the region. It became clear after we wrote down these points that no such block probably existed in north-east Victoria. The killer of course was the difficulty of satisfying both points 1 and 5. There tend not to be large and interesting blocks of bush for sale within walking distance of milk bars.

However, if we ditched point 1 the decision became a lot easier. Chiltern is a lovely small town, on the railway line near Albury-Wodonga. Most importantly for us, the Chiltern National Park is right on the edge of town, a marvellous ironbark forest which we knew well. We could live in, or very close to, the town and walk to the national park, and the milk bar. Chiltern was definitely the go.

We put the word out to family and friends in the area to suss out the housing situation in Chiltern and simultaneously started the extremely tedious job of making our Melbourne house look pretty for its auction sale. Initially we were thinking of renting at Chiltern while we got our feet and looked for that dream property. It quickly became clear that rental places were difficult to get, with the agents already having queues for the few available properties.

Fortunately a quick look at the places for sale produced a lovely possibility quickly. A house, orchard and paddock, on the edge of town. I went up and had a look. It was great! Certainly not an alternative-looking place: solid cream brick, but it had a big shed, a 50 tree orchard and lovely red gums and yellowbox trees near the creek. Just on the edge of town so only three minutes by bike to the milk bar, and only five minutes to the national park. We were able to buy it for less than half the price of our Melbourne house.

Moving was probably as stressless as it could have been. Cleaning out our gear encouraged us to throw away lots of useless objects (why do we accumulate so many thousands of bloody widgets?). It was wonderful to wake up to a pied butcherbird carolling rather than the Melbourne neighbours' flawed muffler.

First day bush

Most encouraging on our first day was meeting our next door neighbours, Vito and Linda Conticchio and their children, Candice and Julian. We found out that they had preceded us by 16 months, leaving Melbourne for the delights of a small farming block. Vito asked if we knew much about gardening as they needed advice, mentioning in passing that they were *Earth Garden* readers.

I smiled modestly and subtly indicated we knew more than a wee bit about horticulture. However, I stopped giving advice and started asking questions as they showed us over their patch. In their 16 months they've established a thriving patch of self-sufficiency: huge vegie beds, chooks, goats, sheep, rabbits, and both beef cattle and a house cow for milk.

Linda said that their backyard in the city had been completely concrete. And they seem to have made the transition to the country without making a single mistake. Their land, their animals and the vegies look in great shape.

We'll have to try to keep up with the neighbours.

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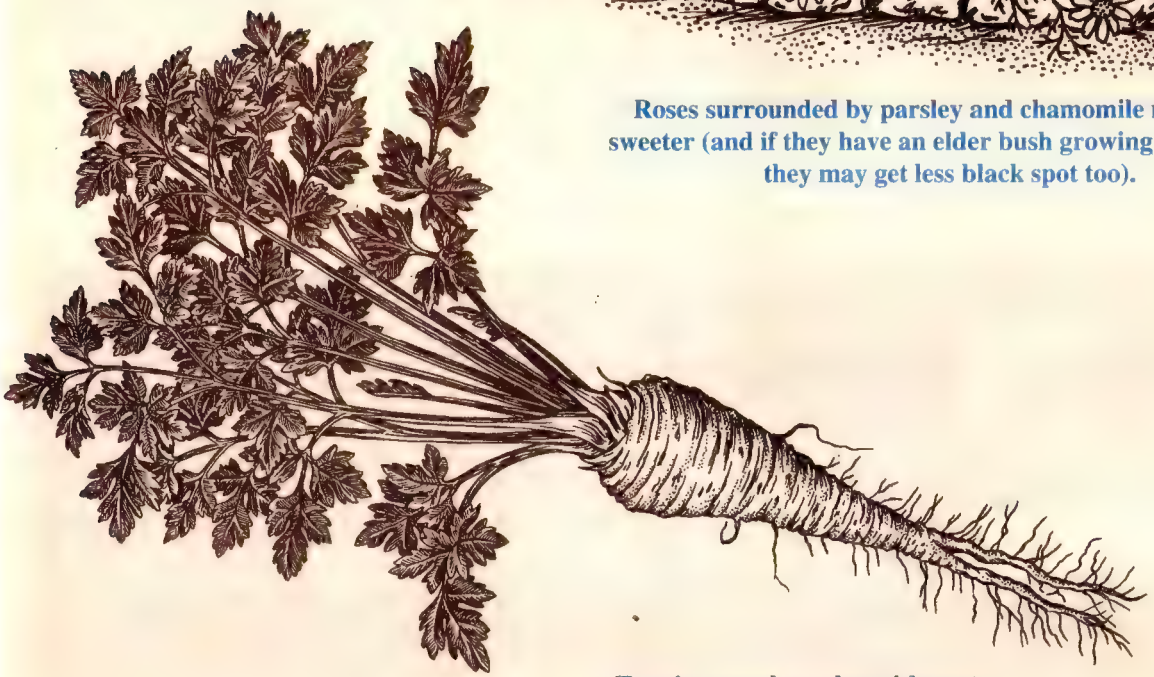
New, never seen before illustrations for Jackie French's Herb Book

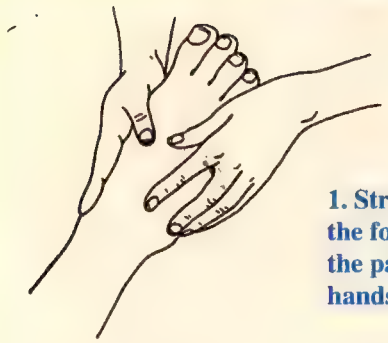
by *Earth Garden's* illustrator, Kathie Hollis

Roses surrounded by parsley and chamomile may smell sweeter (and if they have an elder bush growing above them they may get less black spot too).



Turnip rooted parsley with root.

How to give a foot massage.



1. Stroke the sides of the foot firmly with the palms of your hands.

2. Press your fingers deeply around the toes on both sides of the foot.

3. Quickly pinch your fingers up and over the sides and top of each toe.

4. Firmly massage the base of the heel (press your fingers in well) and the ankle.

5. Now gently stroke the whole foot until the owner begins to purr.

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Above: Sow thistle in flower (originally drawn to show its difference to the dandelion shown below).

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A way to keep clean the water from your roof

Inventor Kevin Sims has devised a cheap and effective new method for making tank water free of contaminants.

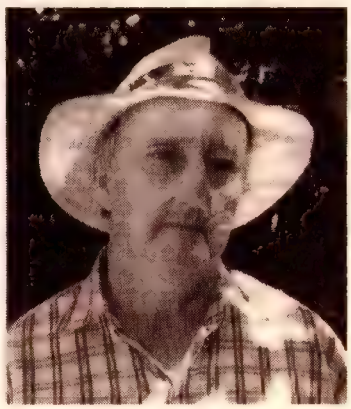
by Martin Hirsch
Pomona, Queensland.

AS town water supplies become more expensive, an increasing number of householders have turned to rainwater tanks, either as a standby measure or to supply drinking water. In rural areas, residents use tank water for all needs, conserving it when rains are scarce.

Many city dwellers have rainwater tanks by choice, wanting to avoid reticulated water additives such as chlorine or fluoride. But every rainwater consumer has one common concern and that is how to keep the supply free of contaminants.

Pollutants are widespread and can enter the water supply at different points, the most common being dust off the roads, animal droppings and tree litter which all settle on the roof before being washed into the system. The less visible pollutants include spray drift, paint and metal particles off older roofs and organisms breeding in depressions and recesses of guttering, pipes and 'ground-to-head' feeder pipes where large quantities of water accumulate, some times for months.

To ensure a water supply that is as clean as possible, Noosa Hinterland inventor and Honorary Ranger, Kevin Sims, has experimented with a host of diversion systems and has finally come up with a device that is well worth purchasing the parts for and either installing them yourself or getting a qualified plumber to connect them in less than a couple of hours.



Inventor Kevin Sims became frustrated with cleaning sludge from his tank.

The system, which Kevin termed FLUSHAMATIC, is certain to remove the bulk of all contaminants from roof-collected water. Even if all components are bought new, the maximum outlay would amount to $50 but using some secondhand parts like a tap in reasonable condition, can cut your costs in half.

Most hardware stores or plumbing supplies merchants will stock the following: (*all in 90 millimetres diameter) length of storm water pipe, 3 elbows, a coupler which is threaded at one end, a screw-on cap, a t-piece with inspection cover opposite the 't', a one-inch ball valve tap, length of non-stretch nylon or steel line and one pulley.

At 57 years of age, Kevin has found many ways to help the planet. FLUSHAMATIC evolved very gradually from a brainstorm about four years ago when he became frustrated at having to empty the sediment at the bottom of water tanks. Sounds familiar, does it not? That black sludge at the bottom, where does it comes from?

"I was also concerned about the aerial spraying and industrial pollutants. The Council-supplied reticulated water did not come up to my expectations," Kevin said. He did look at commercially produced filtration systems too, "but, they were too expensive for me".

Foremost in his mind was the desire to catch as many pollutants as possible before they enter the tank. "The idea has been all along that when you get the first rains, it washes the roof clean, enters the diverter section and automatically runs away," Kevin explained. Kevin's FLUSHAMATIC with which he has no commercial goals, works well in all but the most extreme conditions such as heavily clogged guttering.

The way he described the installation, it sounded like child's play, although I would expect some first-timer DIY's to struggle with one or another part. Having seen the system in full flow, it seems $50 well-spent, considering that at the end of it one has quality drinking water.

So here it is: You will need two Hessian bags (potato sacks are fine), a length of nylon or steel line, which is connected over a pulley (see illustration A). When the bags are dry and light, the tap is in the 'on' position. Once the rain arrives, the bags get progressively heavier and their combined weight pulls the tap shut.

To assemble the diverter system, follow illustration B. Once you get to the end cap, drill a hole for the tap and secure well, ideally with a 25 millimetre (one-inch) nut on the other side against a washer. Kevin recommended proper pipe adhesive for a tight seal at all joints.

Any clogging can be prevented by installing an optional mesh-filter into the down-pipe of the t-section nearest the top of the tank. However, Kevin's best advice was to service the tap end regularly, making sure it operates smoothly and there are no obstructions in the tap itself. (A frog caught at one time in his system defeated the engineering ideals but these incidents are rare).

To get the necessary leverage on the tap, the handle has to be extended with a flat, 40 centimetre piece of steel.

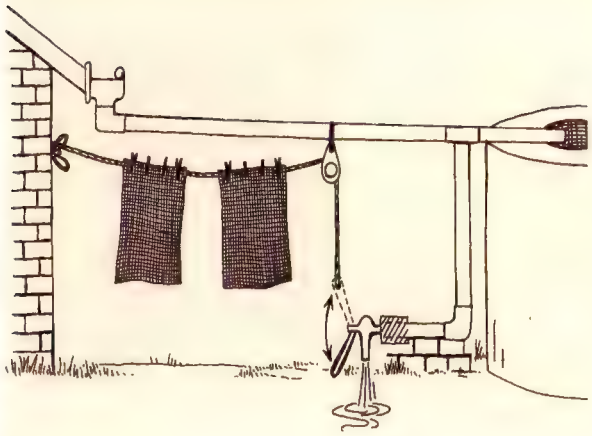


Illustration A

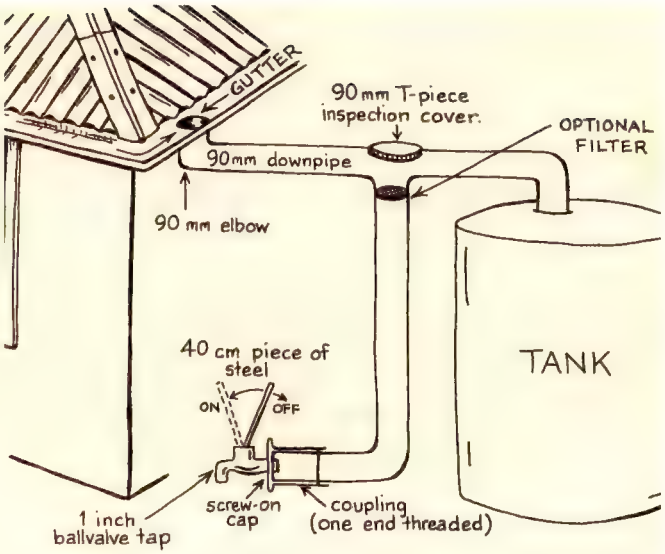


Illustration B

You need to drill holes at short intervals to help you set the appropriate point at which the taps shuts off completely, thus allowing all water to then empty into the tank. In 'clean' environments, early shut-off can be set by connecting the string to the extreme end of the handle whereas in polluted areas, more water needs to be 'wasted' to wash the roof clean by attaching the line closer to the tap itself.

It is with this section of the device that you need to exercise some trial and error but, after two sessions, protected by raincoat or umbrella, your system should give you trouble-free operation.

Very few people in this area have spoken of lack of rainwater lately and many have filled their tanks many times over but, seasons change. Rainwater – all water – is precious and sensible use is better than picking up the telephone to order some in.

• ***For further tips and general advice, the inventor can be reached on (07) 5485 1096.***

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At Least We've Started

Michael Uniacke continues his regular column on starting out on the long road to self-sufficiency. This issue he's balancing philosophical birds and hungry possums.

Owl was that again?

Our three owlish visitors are not owls. We visited a fauna park in Barwon Heads, Victoria, just after Christmas, and spotted our friends, or their relations at least, in a large cage bearing the sign, Tawny Frogmouths. But they still looked very wise as we gazed at them one afternoon, huddled together on their favourite branch. Quite possibly they were resting before the evening's hunting and dining. I said we should name them Curly, Larry and Mo. Mattie said if I was going to assume they were all boys, she would assume they were all girls, and said we should call them April, May and June. Shirl suggested a compromise based on their wisdom. "How about Aristotle, Wittgenstein and Kant?" I said. In the end we decided on Ari, Witty and Canny. Sometimes you can see them at twilight, flapping quietly between the trees. If I were a mouse I would think there was a fleet of Stealth bombers overhead.

Playing the percentages

Jackie French once suggested that we should grant a tithe of 10 per cent of what we grow to the animals who were on this land long before any of us were. That's completely reasonable and fair. I still maintain that view even if our resident possum claimed 100 per cent of our nectarine crop.

It isn't quite as bad as it sounds. Between them, the two miniature nectarine trees produced exactly two large, plump fruit. Shirl was waiting for the day she could do the harvesting. Every week she would visit them, squeeze them thoughtfully, and calculate the grand morning when she would harvest them. On the appointed morning, she went outside, and quickly returned to ask me what I'd done with them. A search revealed two fruit stones, and if we'd looked further, probably a very fat and sniggering possum.

Shirl is extremely cheesed off. She understands Jackie's point of view, but is now inclined to suggest a sliding percentage scale for a first crop, plus a negotiable period of grace, plus clear definitions of fruit, territory, rights and the basis of calculation. Mattie put it rather more simply. "Just get some wire mesh," she said.

We used something similar for the broccoli. I love the tawny frogmouths and their wisdom of the ages, I like the possum and its scampering runs along the pergola, but I have no sympathy for the rabbits. I think they are entitled to zero per cent of what we grow. We came home after a few days at the beach, and found our broccoli reduced to pathetic little stumps. Johanna said rabbits seemed to be back. I put chicken wire guards around the plants, spoke a few soothing words, and they have since sprouted new foliage. I think they'll make it.

The beetroot came through unscathed. We picked a couple, and enjoyed the purple proceeds. They were especially good with tacos. The corn, alas, grew halfway and then just stopped. We might have planted too late. What does this all add to?

Nectarines: animals 100 per cent, humans zero;
Broccoli, animals and humans, say 50 per cent each;
Beetroot, animals, zero, humans 100 per cent;
Corn, zero for everyone. So even in this very small list of

produce, there's an odd sort of balance.

The road to self-sufficiency is paved . . .

I never had much of a record for paving, for the obvious reason I never had to do it before. I made a quarter-hearted attempt some years ago, choosing an especially ugly section of rock-hard clay ground. I scratched it a bit, wriggled in a dozen broken bits of slate, and let them be. If you sort of glanced at it quickly, the effect wasn't too bad. However, leaves and dust quickly hid the bits of slate, and I think that was merciful. A little later I made a half-hearted attempt. This was twice as good as the first attempt, which of course still wasn't saying much. I reasoned that if you laid the stone in evenly and deeply, the clay would hold it together. But the slate was irregular in sizes and thicknesses, and were easily knocked out of the ground.

Now I'm making a full-hearted attempt. I studied the paving section in the book Alan and company gave me when I finished at Earth Garden. Upon reflection, I realised that paving, basically, is a bit like vowing to pave and to hold. Something needs to hold it together. I also found out that what I am doing is called crazy paving, for reasons that, frankly, are stark raving obvious.

I removed the laughable earlier attempts, spread a good layer of dry sifted clay, levelled it, and spent hours turning flat pieces of rock this way and that way. When this Flintstones-like jigsaw more or less fitted, it was time to set them gently in place by scooping out the clay powder and pressing them into place. By this time I was bending over so much it was necessary to go and lie flat on the kitchen floor. This was kangaroo-loose-in-the-top-paddock paving.

The last task, and one I hadn't done before, was to make up a mortar mix and cement the bits in between the slate. I mixed the mortar with finely sifted clay, using an old kitchen vegie steamer. I tried to keep an even ratio between mortar and clay, but I was hot, tired, bothered and pretty much beyond caring. I slopped in mortar, clay and water at will, mixed the mess, and trowelled it on.

I didn't use a spirit level. This was crazy, remember? It's an irregular, slightly bumpy section that collects water in certain spots, but it's holding fast and looks good. Shirl has been taking visitors out to inspect the finished bits, and I never saw her do that before. You do have to be a bit crazy to do this, but I'd be suspicious of sane paving.

Near golden pond

If I were doing my job properly as a writer of this column, I would get up, peer about on the shelves for my old copies of *Earth Garden*, flick through several, not find what I was looking for, read up on the ways of cooking polenta, put the kettle on, ask Shirl if she'd seen what I was looking for, ask Mattie, make a cup of tea, do a quick search of the pantry, nick outside to the old cupboard where I keep assorted tools, do a quick tidy up, put the kettle back on because the first cup of tea went cold, still haphazardly search, and eventually wander back to the computer to find it proclaiming a disk error. But I'm not going to do any of that because I'm afraid of what I might find: the date I grandly announced I was going to build a pond.

I would hate to compare that date with this grand announcement: We Are About To Finish the Pond. We sorted out the problem of the shale by deciding on a layer of sand, a layer of old carpet, and then, black builders' plastic. We would hang Hessian bags over the sharp rocky sides. We would use 25 mm poly pipe to run water from the auxiliary tank. We have an island with 13 mm poly pipe to serve as a fountain.

We have the sand. We have the plastic. We have the poly. We have the water. We have the determination. We have the pluck. We almost have the pond!

However, I will be more circumspect next time about announcing grand plans and magnificent ideas. So I cannot possibly tell you about my idea of yet another pond, nearer the house. Please take no notice whatsoever of how the subtle Japanese influence of water near decking appeals to me. Completely ignore my telling you that I can sculpt something attractive and flowing around a hillock near our washing line.

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The Answer Beats On The Factory Roof

The Rainbow Power Company has one hundred photovoltaic solar panels with a peak output of seven kilowatts on the roof of its combined manufacturing and retail outlet premises. The panels range from 60 watt to 120 watt panels and includes 80 watt BP laser-grooved solar panels. They generally produce more power being than is needed for the average power consumption of the premises.

by Peter Pedals

*Rainbow Power Company, Nimbin, New South Wales.**

Power Wastage

The Rainbow Power Company used to have a stand-alone power system (that is, not connected to the power grid) even though the power lines were only 50 metres away. Although we generally produced more power than we consumed, we wasted a lot of power on sunny days when we reached the limit of the storage capability of our battery bank. This excess power could never again, of course, be accessible when there was not much sunshine.

We only had 50 solar panels back then and had either too much power when we had plenty of sunshine or too little power when we had continually overcast weather. We needed to solve these two issues: how can we use the surplus power produced on a sunny day? How can we avoid running a petrol generator as a backup when there isn't sufficient sunlight to keep up with our power requirements?

A petrol generator is noisy, polluting and a very expensive and inefficient way of generating electricity. More battery storage would dramatically increase costs and maintenance and increase generator run time rather than reducing it, as battery storage is generally between 80 per cent and 90 per cent efficient and consumes more power than it releases.

Becoming Grid-Interactive

In 1995 we decided to connect our premises to the NorthPower electricity grid. This immediately overcame both problems. When there is more power being produced than we consume, the surplus power is exported into the NorthPower grid network for power consumers in Nimbin to use. When there is not enough sunshine to keep up with power consumption the power is supplied by (imported from) the grid. This is then deducted from the surplus that was supplied (exported) to the grid previously. Even though we are relying on coal-fired power stations to fill the gaps, this is a more efficient and less polluting (per kilowatthour being produced) method of generating electricity than the petrol generator.

The Sustainable Energy Development Authority (SEDA) recognised Rainbow Power Company's efforts to both demonstrate renewable technology and achieve zero Greenhouse gas emissions by assisting us to reach these goals. In December 1998 we wrote a letter of intent to sign up with the Commonwealth Greenhouse Challenge program. We take pride in the fact that we are the only commercial premises in Australia that we know of that has a negative carbon emission impact on the environment.

We generally export more power than we consume. The only power we consume that is associated with carbon dioxide production is what we import on cloudy days. This is more than compensated for by the surplus power that other consumers can use from our solar power source (that may have otherwise been supplied by the coal-fired power station).

The Environmental Effect of Photovoltaics

We are occasionally challenged with the idea that solar panels consume more power during their manufacture than they produce in their useful life. The fact of the matter is that the amount of power produced by the modern photovoltaic solar panel will equal the amount of power required to manufacture it in 2.5 years in most sunny reasonable locations in Australia.

The solar panels on the roof of Rainbow Power Company have all been there for more than 2.5 years. Over the years we have planted lots of native trees around the premises which further act as a carbon sink by consuming carbon dioxide out of the atmosphere and turning it into living tissue.

What Happened to Our Excess Power?

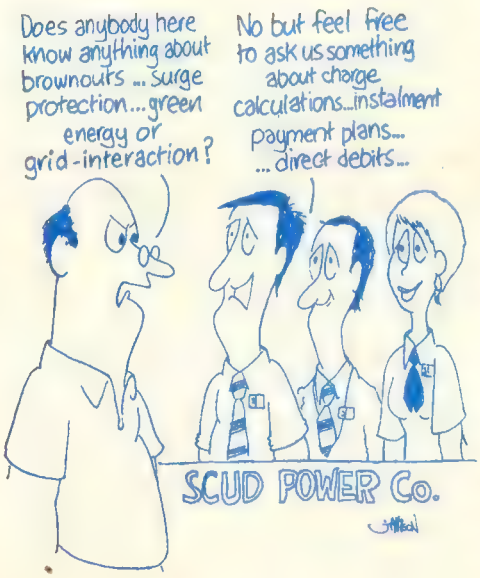
In brief, it goes out into the big wide world of overhead power lines, never to be seen or heard of again. There is no way of knowing where the power goes.

How Privatisation and Economic Rationalism Affects Us

The NSW Government has been applying economic rationalism to the public sector with the ultimate aim of privatisation. Throughout NSW we used to have County Councils which operated as the local electricity distributors. The

County Council was answerable and therefore most likely to look after the interests of the local population. Since the County Councils have been replaced by the larger electricity authorities, such as NorthPower in our case, the new bodies do not appear to be coping very well with their work load.

You will hear many complaints that service has deteriorated since the abolition of the County Councils, and that it is very difficult to find an employee who can either understand or effectively deal with complaints, or anything unusual such as being grid-interactive.



The User Pays Principle

The new 'user pays' system means local users have to contribute to maintenance costs. Unlike Queensland and Victoria, New South Wales have not yet privatised this industry despite several attempts. When it finally does so, the industry will most likely be owned by a foreign company and dividends to their shareholders will take precedence over everything else. Inevitably prices will go up and the quality of services will go down.

GreenPower Scheme versus Grid-Interactive

Any scheme that aims to reduce Greenhouse gas emissions deserves applause. There are however a number of inequities in the grid reticulated power systems in Australia that appear to be forgotten about in any discussion about a GreenPower scheme.

When the *Earth Garden* office, for example, elects to pay a 20 per cent premium on their power bill (see *Bush Telegraph*, EG 107) they are guaranteed that that amount of power will be sourced from renewable energy generation. If the *Earth Garden* office uses 5,600 kilowatthours of electricity in a year, substantially more may have to be generated at the 'renewable power station' to meet that demand to make up for the line losses and transformer losses between the power station and the *Earth Garden* office. The greater the distance between the two, the greater the line losses.

So, if you use power in a household a long way from a coal-fired power station you will probably be contributing significantly more to the nation's Greenhouse gas emissions than if you were near the power station.

To minimise Greenhouse gas emissions, renewable power should be generated towards the extremities of the grid. This would help decentralise the industry and improve the quality of power (reduce brownouts). Rather than wasting valuable real estate by setting up solar farms, solar arrays should be placed on roofs and over carparks where they serve another purpose or use up space that would otherwise be wasted real estate.

With the *Earth Garden* office it would have made most sense to either lease out the roof space to Powercor or for Powercor to provide a subsidy to *Earth Garden* for the solar array to then be owned by *Earth Garden* as a long-term arrangement. This could ensure that they do get all the power from renewable resources that they were allocated and reduce costs by not having to acquire extra real estate.

Placing solar arrays on roofs would guarantee greater decentralisation of the grid network and give a greater boost to the long struggling renewable energy industry. Another problem with solar farms is that the power authority bypasses the renewable energy retailer who have been largely responsible for raising awareness of renewable energy, have undergone appropriate training programs at their own expense and have struggled for many years with low wages and long working hours.

Y2K Proof Power

There is a real concern worldwide that power utilities may fail as a result of the millennium bug (Y2K).

The effect of this could happen any time from 1999 onwards, where 1 January 2000 is the most critical date. Just as great a concern is held for the possible disastrous effects of economic rationalism, although this would not be date related. Having a battery-based, grid-interactive or stand-alone power system gives one a real sense of security.

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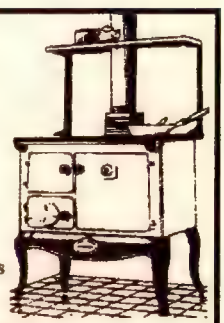

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At last, we see the light!

It can take a while to get around to putting a skylight in but it was just a matter of cutting a hole in the roof with a chainsaw.

by Bruce Hedge
Newham, Victoria.

Why didn't we do it years ago?

Aaah, how many times have I heard that from friends who have just "seen the light". Well, this column is about hindsight, so here is a bit of background. Fourteen years ago we moved an old wooden school building on to our block. We wanted to recycle it after the Education Department had declared it "surplus to their requirements" and it gave us an instant 20-square house. In hindsight, I would have thought three times instead of twice about the permacultural implications of living in such a building in this climate, but over the years we've slowly renovated it, so it's now quite liveable. They certainly constructed buildings differently 122 years ago! Wonderful, handmade nails, handcut mortise and tenoned studs into sole plates and hugely over-sized hardwood framing. Not to mention "inch and an eighth" Baltic pine floorboards and double hung sash windows. HOWEVER, the energy efficiency of such a building is appalling. No insulation in the walls (and very hard to put in we've discovered), poorly designed ventilation, and the small windows and ovehanging verandahs make the rooms dark.

Well after 14 years of dithering, I finally bit the bullet and PUT IN A SKYLIGHT. It was just so simple to cut a hole in the skillion roof area of the kitchen (with a chainsaw!) and replace the corrugated iron with 'laserlight'. The feeling of light and openness in our previously gloomy kitchen is quite extraordinary, and we actually get direct sunlight, which is just delicious. Dunno why I didn't do it years ago!

Then I started working out the economics. For at least six months of the year, we had two by 100 watt lamps burning eight hours a day in the kitchen area. Well I reckon that I'll save five kilowatt hours of electricity a week, in winter, and probably 200 kilowatt hours a year overall. At 13 cents a kilowatt hour, that's $26 a year, and, if I'd put it in when we moved the building, I'd have saved about $350 altogether! I've also just worked out (roughly) that if I'd used compact fluorescents instead of incandescent globes, I'd have saved about another $40 per year, or $600 over 15 years. Even allowing for the replacement of globes every two years! Aaaargh! We need a kick in the pants occasionally, don't we? Or maybe we just need to train ourselves to be vigilant in switching lights off. You readers who have stand-alone electric systems know all about that don't you! The exercise cost me $50 and a day's work. So get out and do it now. We've already identified another five potential skylight places and they'll be done very soon. Our quality of life (and light) will improve significantly. We will have to devise a system to exclude light and heat in summer. Hopefully that will not present too much of a problem. Any suggestions? Put it in huge letters! SKYLIGHTS ARE WONDERFUL!!

Where is the rain?

The big dry continues here. It seems I've said that in every column for the past two years, but we really are in a potentially disastrous situation here in Central Victoria. The autumn break has not come (again) and dams are at all time record low levels. The main dam feeding the huge population area of Sunbury, Bulla, Gisborne, Macedon and Riddells Creek townships is below 28 per cent full and things are getting grim. The local (privatised) water authority doesn't seem to be panicking yet, but if we don't get run-off rains this winter, the new millennium will be a very interesting time indeed! We haven't quite reached the stage of recycling the water from our hot water bottles yet, but we do have to train Wwoofers to conserve water.

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Building a tower of power

Permaculture is about opening one's mind to new ideas and techniques of living softly on this earth. I had a pleasurable weekend recently attending one of Alanna Moore's Geomancy workshops in Maldon, Victoria. I was open minded about dowsing, ley lines and other esoteric techniques associated with Alanna's approach to permaculture and was interested to learn how it's done.

The weekend included building a "tower of power" at Ellen and Ray Stanyer's place to "enhance the healing energies" in the stark, hungry landscape near Maldon. About 40 such towers have been erected on farms in South Australia, where they are said to act as acupuncture needles on the landscape, radiating beneficial energies to farmers' crops. There is plenty of anecdotal evidence that these towers do indeed have a special effect, so it will be interesting to watch for such effects in Ellen and Ray's garden.

Constucting a tower of power at the Maldon workshop.

These towers are based on old, round towers in Ireland, which are appreciated by locals for their fertile surroundings. They are constructed of paramagnetic stone and are thought to act like giant magnetic antennae, drawing down energies beneficial to the soil, if they are correctly located. The all important positioning of the towers can be determined using dowsing techniques. I have no doubt that there are many people around with the ability to dowse, despite scientific scepticism, but my own ability is yet to be discovered.

I remain open minded about this esoteric branch of land husbandry. After all, biodynamics was thought of unkindly for a very long time. It is now becoming well accepted, and initial reaction in the West to Eastern practices such as acupuncture and feng-shui was hostile to say the least! When you compare our extremely poor soils to the mineral rich soils in Europe, North America and New Zealand our fragile continent needs all the help it can get.

My own experience with rock dusts, which are also part of Alanna Moore's approach to land management, has been excellent. She adds an extra dimension by suggesting that the more para-magnetic this dust is, the better for attracting beneficial energies. Alanna's philosophies are much too complex to explore in a short article, but anyone interested could obtain more information by sending a SAE to PO Box 1263, Lismore, NSW, 2480.

First frosts

The first killing frosts have come with vengeance and there are buckets of green tomatoes to be made into chutney, potatoes to be harvested, zucchini soup to be made and frozen and new recipes to learn from our wonderful Wwoofers. We are indeed very fortunate to live this wonderful life in the country.

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The Book The Woodchippers Want To Ban . . . Now It's A Bestseller

When Alan and Judith Gray's ideas for the book *Forest-Friendly Building Timbers* first gained shape during a tour of central Victorian wineries with Alec Marr, the National Campaign Director of the Wilderness Society, no one dreamed it would spark a national debate about freedom of speech. Or did they . . . ? Here *Earth Garden* editor, Alan T Gray, gives a run-down of events surrounding attempts by the National Association of Forest Industries (NAFI) to ban the book.

by Alan T Gray
Trentham, Victoria.

ON 30 March I was in Sydney, having just finished the NSW launch of our book. *Forest-Friendly Building Timbers* was being launched in every State to coincide with the Wilderness Society's national consumer campaign to eliminate the demand for (and legitimacy) of logging our native forests for timber products. We had successfully launched the book in Hobart on 17 March with Senator Bob Brown in the BBC hardware store in Moonah, and Father Paul Collins had conducted the Canberra launch of the book at a BBC store at Fyshwick in the ACT.

At 4 pm, I had a call from the office — we'd just received a fax from lawyers acting for NAFI demanding that we undertake within 24 hours to withdraw the book from sale, distribution or promotion or else they would seek a Federal Court injunction to ban the book. On what grounds? NAFI claim that the book contains many statements that are "false, misleading and inaccurate", and that the book breaches the Trade Practices Act.

What followed was a hectic month of claim, counter-claim, desperate efforts by our team of supporters to fight back against NAFI, and a monumental wave of support from Earth Garden readers, lawyers, free speech advocates, people who'd never heard of Earth Garden, and even sawmillers and timber merchants — from Hobart to Perth.

Of course, we knew that our book did not contain false, misleading or inaccurate statements: we spent three years researching the material for the book and making sure that every claim, statistic and figure is true. But we also knew that the last thing NAFI and its members wanted was for the community to learn that there is enough plantation timber in Australia so that we don't need to log any native forests at all. The good timber versus bad timber message is not one that will help woodchippers continue their caper of turning wild forests into woodchips so they end up as paper bags and writing paper on the scrap heaps of the Northern Hemisphere.

Barrister, Brian Walters, is the co-founder of WILD magazine, and has been a staunch forest campaigner for many years. Brian was the first person I rang when we received NAFI's legal threat, and the 24 hours until Brian's legal opinion sank in — that there was no legal merit in NAFI's threat — were the sickest I've experienced in 13 years running Earth Garden.

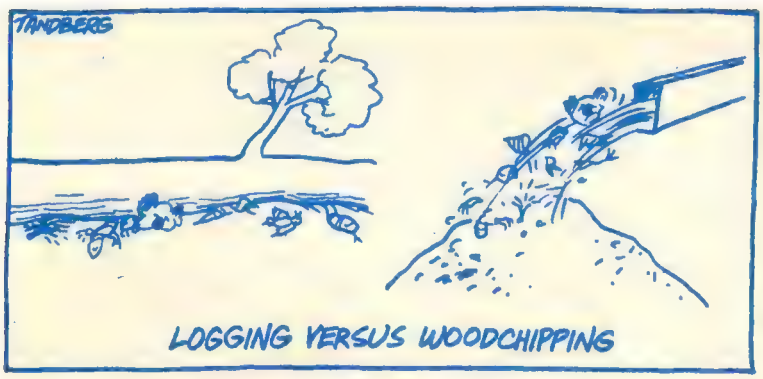
Brian has been a pillar of support during this furore, and he and the EDO — the Environment Defenders' Office — wrote back to NAFI's lawyers on 31 March telling them that we would not be undertaking to withdraw the book.

Next, the ABC TV program, the 7:30 Report, screened a story about the developing saga, and ten minutes before the Melbourne launch of the book at Readings bookshop in Carlton, I received word from the 7:30 Report crew that BBC Hardware Ltd had released a media statement saying that because of NAFI's legal threat (they, along with the Wilderness Society, and our two book distribution companies received the same threat) BBC were withdrawing support for the book and had never authorised use of their name in it.

We were devastated, because it hadn't occurred to us that such a flimsy legal threat would make BBC back down. BBC Hardware had been involved with the book for more than two years, and this was a positive example of a very constructive relationship between Greens and industry that could have been a model for future co-operation — until it was destroyed by NAFI.

We proceeded with the Melbourne launch before more than 100 people, and Readings quickly sold more than 250 books, and ordered many more.

Several days later there was a key development in the saga: on Sunday 11 April, the ABC Radio National broadcaster, and President of the Free Speech Committee — Terry Lane — interviewed Professor Allan Fels, the Chairman of the ACCC, on his program, The National Interest. Professor Fels agreed that NAFI's use of the Trade Practices Act to threaten us was "not legitimate", that any Federal Court judge would give them a "very frosty reception" if they sought an injunction, and that they themselves



Above: Melbourne Age cartoonist, Ron Tandberg, sums up the issue in a few pen lines. Cartoon reproduced courtesy of *The Age*.

Right: Alec Marr, National Campaign Director of The Wilderness Society, tells the audience at the Melbourne book launch in Readings' Carlton bookshop that the book "will be a turning point in the battle to save Australia's native forests".

might have breached the Act if they had applied any undue pressure on BBC Hardware to induce them to withdraw the book from sale.

Journalists loved this, and the story was again in the media. NAFI sought an urgent meeting with Professor Fels. We did the same, and presented 20 pages of documents about the issue to Professor Fels, who promptly announced that NAFI were being investigated.

Then the focus switched to Tasmania when the highly-successful Tasmanian Alternative Home Expo took place on the weekend of 16 to 18 April. A Tasmanian sawmiller and timber merchant, Mr Kim Booth, was so disgusted with NAFI's actions to try to ban the book, that he announced publicly that he was stocking and distributing the book in his timber yards. "Next we'll have to refer a copy of the Bible to NAFI for their opinion," he remarked.

Mr Booth employs 22 people at Timber World Pty Ltd in Meander and Timber Wholesale in Glenorchy — more than twice the number of people employed on site at the Hampshire woodchip mill, the largest woodchip mill in the Southern Hemisphere, in north-west Tasmania. On the same day of Mr Booth's announcement, Father Paul Collins, an outspoken Catholic priest and author, made a public statement with Mr Booth, saying that "woodchipping oldgrowth forests is sinful".

Two days later in Perth, the WA launch of the book took place at Dymocks bookshop in the Hay Street Mall. The book was launched by none other than the WA State Director of the National Party, Mr Jamie Kronborg. The WA Nationals have a far more progressive forests policy than the ALP or Liberals, and Mr Kronborg made strong, forthright statements in support of the book, against NAFI, and in favour of a switch out of logging native forests and into plantations. Naturally, we had kept his identity secret until just minutes before the launch, for fear that NAFI might use its lobbying techniques to prevent Mr Kronborg launching the book.

Later that day on Perth ABC Drivetime radio I debated a representative of the Forest Protection Society —

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the astro-turf (fake grass roots) group funded by NAFI to appear to represent timber towns. During this debate the Federal Forestry Minister, Mr Wilson Tuckey, phoned the program, and made some extraordinary comments. In part, he described plantation pine as "fake timber", thereby offending the industry that produces two-thirds of all Australia's current building timbers.

Later that week NAFI made a bizarre public statement claiming that the ACCC has cleared them of any wrongdoing. In fact, the ACCC had written to NAFI rapping them over the knuckles for their original legal threat to us — their threat had not disclosed that under Section 65 of the Trade Practices Act, Earth Garden was exempt because we were "prescribed information providers". The Trade Practices Act was designed to protect consumers from unscrupulous corporations; it's not designed for large corporations to suppress consumer information.

The ACCC, in response to NAFI's claims of victory, was forced to issue a public statement saying that while they could find no evidence of undue pressure on BBC Hardware by NAFI, the investigation was now being widened (not closed) to assess other allegations of threatened boycotts, and more significantly, whether or not NAFI's legal threat itself had breached the Trade Practices Act.

Meanwhile, I flew back from Perth to Melbourne for the AGM of the Free Speech Committee. At the meeting, the lawyer Bruce Donald, of the Sydney EDO, documented many cases of large corporations using legal threats and writs to suppress "little people's" attempts at environmental protection. People commented that had Earth Garden been a large publisher like John Fairfax or News Corporation, NAFI wouldn't have dared threaten legal action, but small publishers are very vulnerable against "bottomless legal cheque books".

The next day the National Forest Summit started in Melbourne, and there was just enough time for me to present a paper about 'A consumer approach to forest campaigning' before finally getting home in time to catch a cold.

The week before, Environment Victoria had organised a hugely-successful public meeting and slide night. Over 250 people listened to an impassioned speech by Brian Walters, followed by slides shown by Dr Barry Traill (an independent wildlife biologist who addressed NAFI's central claim that logging forests didn't contribute to species extinctions — of course it does). This message was further to embarrass NAFI when three of Australia's leading professors of ecology released a public statement taking NAFI to task over their objections to the scientific statements in our book.

In reply to NAFI's objections that there haven't been extinctions due to logging, the three professors said:

"This argument by NAFI creates a false impression. It is incorrect to imply that there is no threat of extinction from current forestry practices. Logging has significant adverse effects on forest biota. Species . . . declines . . . caused by current forestry practices . . . contravene existing State and federal forest policies. There are localised extinctions occurring due to current forestry practices. Current logging practices in Australian forests are not ecologically sustainable."

These statements came from: Professor Tony Norton, RMIT University, Melbourne; Professor Hugh Possingham, University of Adelaide; Professor Harry Recher, Edith Cowan University, Perth, on 21/4/99.

Gradually it was emerging that NAFI's bumbling Executive Director, Dr Robert Bain, was turning our book into a bestseller — despite the fact that some very moronic booksellers were telling people: "Oh no, you can't buy that book — it's been banned".

Dr Bain wanted to ban our book yet on 18 January 1992 Dr Bain wrote to The Age newspaper complaining because NAFI wasn't allowed to show their TV propaganda advertisements during the Tasmanian election campaign. In part of his letter he said: "Free public access to factual information is a cornerstone of democracy". Yet with our book, NAFI is playing Chief Censor of what Australians can or can't read.

Dr Bain has now left NAFI to become General Secretary of the AMA. As Australian Greens senator and former AMA member, Dr Bob Brown, said: "Good health is underpinned by good environment, clean air, water and land. Dr Bain's future role in the AMA will bear careful watching".

Why the book is important

From now on, using this book, anyone who buys any timber can use their consumer power to become a forest campaigner. Rather than simply saying forest destruction is bad, we're giving people positive suggestions for good alternative timber products. If consumers and councils take up the message of this book, we can work around the 'political logjam' we face in Canberra with the two old political parties.

The book arose from the acceptance after the 1996 federal election than neither of the old parties is interested in protecting Australia's native forests — even though that's what Australians want. So, we're going straight to consumers and cutting the ALP and Coalition out of the loop. The woodchip and sawlogging industry doesn't like this, but the fact is, consumers want this information.

Footnote

The Weekend Australian of 1-2 May listed *Forest-Friendly Building Timbers* as entering the Australian bestseller list at number 9.

• Ask your local bookshop to stock the book, and buy a campaign T-shirt ($20 plus $4 postage from *Earth Garden*: small, medium, large, extra large) to defend our forests *and* free speech.

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Earth People Write continued from page 7

Starting again

Dear Earth Garden,

At present we are renting a house on an average suburban block in the outskirts of Brisbane. It seems small compared to the 2.5 acres we had in WA however it is much easier to look after. We only have the two dogs now to look after (I am missing my horses though) and I have planted a very small vegie garden with lots of tomatoes, basil and a few other odds 'n' sods. I think our, or my, problem was we wanted to do everything at once which didn't work out. Next time we'll know better and do things bit by bit.

Our daughter Emily is 17 months old and seems to enjoy it here. She loves playing with the dogs. (Their kennel doubles as a great cubby). She also likes to "help" with my garden by helping to hold the hose while I'm watering. We're expecting baby number two which will be great. Chris and I are really enjoying having a little family and are looking forward to getting a farm in a couple of years or so when we're ready to try again.

I'd like to thank all the people who replied to my last letters, especially those who wrote concerning my mosquito problems. Thanks again for such a great, informative magazine. Chris and I both enjoy reading it over and over.

C and A. Andrews, Boronia Heights, QLD.

Appalled by US trends

Dear Alan, Judith, and all the other wonderful, hardworking Earth Garden team!

My husband and I have only just returned home after five months travelling overseas. One of our greatest joys on our return (as well as finding our garden in excellent health after a very unseasonably wet winter!) was catching up on the two issues of *Earth Garden* we had missed during our travels!

While the trip was wonderful we both returned keen to get some dirt back under our fingernails! There are just a couple of quick "observations" my husband and I made during our time in the US (we had two months there) that I would like to share with you.

Both Dave and I were appalled and dismayed to see just how far the US "convenience culture" has "evolved"! Dave jokingly likened it to the last decadent days of the Roman Empire — but I don't think he is to far off the mark! Public transport is a shambles, the corner store and the small family business seem to be an endangered species, and you have to go a very long way to find a cup of coffee that doesn't come in a styrofoam cup! National Parks have kennels for dogs (because you can't go on holiday without the family pet) and resort style accommodation, because you really must be comfortable (and entertained) when getting "back to nature"!

Yes, I know it all sounds very cynical — but when a young guy we met in the US visited Brisbane recently and commented to us that "Australia was a great country, just like the US about 15 years ago" — I was horrified to think that we would ever go so far down the path of consuming away today as if there's no tomorrow!

Anyway, keep up the great work with your marvellous, inspiring publication and hopefully we can all help reverse some of these trends (and repair some of the damage that we have already inflicted on our planet!). Best wishes.

Helen La Rosa.

Looking for a community

Dear Earth Garden,

Can anyone help us with information or expressions of interest in regard to the following.

We are two energetic wimmin (late 20s) looking to form or join established active and functional 'Community'/MO. We are committed to the process of consensus and living without hierarchy, feminism, environmentalism and working towards permaculture-based self-sufficiency.

We are itching (and have experience) to grow heaps of food and build and (WO) manifest energy-efficient technology. We are looking for a (potentially) permanent home that could be used as a base for changing the world.

Namaste,

Shorona seMbessakwini, C/o Byron Bay Post Office, Byron Bay, NSW, 2481, or <shorona69@hotmail.com>.

How do children handle a move to the country?

Dear Earth Garden,

Thank you for a great magazine, I read every issue I can get my hands on, old or new ones. My husband and I would like to make the big move to acreage and be as self-sufficient as possible when we are better off financially. Our only concern is our four children (from five to 12) and the effect it would have on them.

I would like to hear from anyone who has done the "big move" with kids, how they handled changing schools, making new friends, moving away from family, and all that.

Please write and tell me of your experiences, good or bad, to help settle my doubts. Thanks again for your magazine, it keeps me dreaming that one day we will make it.

Cathy McGee, 50 Milpord Street, Redbank Plains, Ipswich, QLD, 4301.

Free calendula seeds

Dear Earth Garden,

Many apologies to anyone who wrote to me after reading my letter in the last issue. I was forced to move before it was published, and I deeply regret anyone's wasted time or energy. I have "tonnes" of calendula seed if anyone would like any (no need for SAE).

Also I would love to swap interesting vegie seeds with other gardeners. Thanks always for a terrific publication. PS: Peta Moxon are you still alive?

J. Stokes, 102 Tuppal Street, Tocumwal, NSW, 2714.

A sad sort of progress

Dear All,

Once again *Earth Garden* arrives in the nick of time to restore my sanity!

Part of Jackie French's article really struck a chord, "Twenty-five years ago it was unthinkable to lock your door". In the 14 years we have been in Rosewood we've gone from unlocked doors to fitting window locks, security lights (handy for arriving home after dark) and in the past few weeks we've fitted security doors. I believe its called "progress", I can't think why.

Please keep up the seasonal doses of sanity. All the best.

Keith and Barbara, Rosewood, QLD.

Interested in social well-being

Dear Earth Garden,

I've just moved from the Gold Coast to the NSW Central Coast, and would like to contact other *Earth Garden* readers/practitioners in this area to swap ideas and tap into the local sustainability networks.

I was interested to read the EG article on making a living in the country, and am thinking about how to apply some of the ideas. Having grown up on a farm near Coonamble, and living all my adult life in urban areas, it seems to me that what both city and country people need are connec-

tions to the natural environment and to other people, and that this provides a sense of purpose and meaning in their lives.

When people are raised in urban areas, they often aren't as aware of this need for connection to nature as those growing up in the country.

Similarly, when people are raised in an environment that is emotionally or socially isolated, they may not be aware of this need for close connection with others. Whereas our white, Western culture has promoted consumption, materialism and individualism, other cultures demonstrate *Earth Garden* values: the importance of community, co-operation and living simply.

In our urban areas, there are fewer opportunities to connect closely with nature or with other people. I think EG people have been able to create their sense of place and purpose through connections to nature, often as refugees form city life and feelings of disconnectedness.

Wherever people have no sense of place or purpose, are without feelings of connection with nature and people, there are human costs in terms of loneliness, depression, crime, suicide.

So I'm particularly interested in widespread social well-being, implementing ideas and actions that promote connection and a sense of belonging. I think this needs to happen in the cities and towns, as well as individuals doing it in the bush. This is my passion, where I'd like to put my energy and skills, together with others who share this vision. I'd appreciate any ideas from EG readers.

Yours sincerely,

Shirley Hotchkiss, 39 Reserve Drive, Bateau Bay, NSW, 2261.

Pots of pleasure

Dear Earth Garden,

Thank you so much for your fantastic magazine — I look forward to it so much even though I live in Sydney suburbia. I try to remember all the handy hints I read for the day that I can finally have my own piece of paradise that I can try out all the ideas on! At present I only have a balcony but it is jammed with pots of vegies and herbs which give me much happiness.

Looking forward to the next *Earth Garden.*

Diane Dawson, Neutral Bay, NSW.

Info on biogas generation

Dear Earth Garden,

In previous issues, I have read articles about people asking for info on biogas generation. I have read a book, which should be available from most state libraries, called *The Biogas Handbook* by David House. Though, it dates from the 1980s, it is about the most recent literature I could find. It contains a wealth of information on designing and building a good generator (from small to large).

David House also recommended *A Chinese Biogas Manual* for very practical low-tech design, (apparently by 1980, one design had been used to construct more than seven million generators). At least you'd feel comfortable that what you were building had been tried before.

Your magazine has been an inspiration to me, to try and get out of the rat race. Keep up the good work.

G. Allen, Moranbah, QLD.

Little things add up to a lot

To All,

It's good to look around and see more and more people making an effort to do their little bit for the environment. But people seem to be more interested in doing big things than the little things. I believe that more can be done by the average person with little effort, and you can actually save a little money along the way.

These little things require little more than thought. For example: it amazes me how many people do not reuse envelopes. Many envelopes we receive are easily opened without damage. After all it's what is in the envelope that is of importance.

I think that people often forget that a whole lot of little things can add up to a lot more than a few big things. Keep up the good work.

Graham Mann, Byford, WA.

Changing lifestyles

Dear Alan,

Here I am at 53 and permaculture and your magazine have altered my life. Within six months my family and I am recycling everything, permacultured my backyard, working on the front, self-sufficient in vegetables, and grey-water recycling to water fruit trees.

We expect to move to a country property within five to six years and I'm already working on alternative energy systems. We have retired and are about to undertake a tour of Oz to look at alternative farms.

Please Note: Any readers north of Perth to Darwin and south to Port Augusta back to Perth who would like to share information and allow a couple of mid-agers to visit, look over the farm and steal ideas, please call ASAP.

Don and Judy Bryan, (08) 9417 3271, Yangebup, WA.

Moving to Mareeba

Dear Earth Garden,

In the very near future I will be living a dream. After turning 21, my friend and I will be moving to Mareeba (North Queensland) to live a simple and carefree life.

I plan on using all the wonderful ideas and alternative methods that I have gathered from *Earth Garden* and put them into practice. Thank you for a very inspirational magazine, not only does it open my eyes to the most important issues of life but gives me a chance to get in touch with others.

I look forward to the next edition and would like a recipe for soap/shampoo from the 'Soapwort' herb.

K Cowell, Brisbane, QLD.

Jackie French's Soapwort Soap

6 cups soapwort leaves and stems
2 cups boiling water.

Chop soapwort very finely. Cover with boiling water. Leave until luke warm. Pound and mash the soapwort in the water for about ten minutes with your fingers or a potato masher until it's a bit bubbly.

Need an olive oil press

Dear folks,

I planted a few olive trees years ago and now they've reached fruiting age. Would anyone know where I can buy an olive oil press, as I have had no luck in searching for it in my part of the woods. Thank you and happy living.

Paola Cassoni, Hoch Kerand, Alpha, QLD, 4724.

WWOOF and surf

Hi Earth Garden Crew,

My name's Shane and I'm looking to WWOOF and surf from Tassie to Northern NSW/South Queensland then across to WA via the coast.

I'd like to hear from fellow surfer/gardeners who may have some work, surf and a bit of tucker to share. I'll be living out of my flat tray so as to be mobile and comfortable and would only need somewhere to park my car and throw down my swag. I'm 26 and have a love for all things natural and the ocean.

Shane Cubitt, (0417) 031 760, PO Box 465, Glenorchy, TAS, 7010.

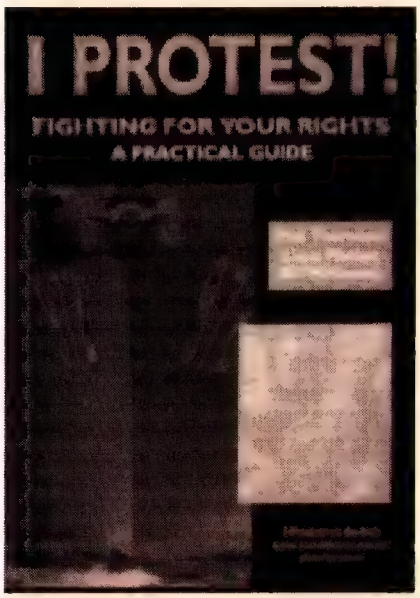
EARTH GARDEN REVIEWS

BOOKS AND MUSIC

Edited by Judith Gray

I Protest
By Phil Thornton, Liam Phelan and Bill McKeown
Published by Pluto Press
Locked Bag 199, Annandale, NSW, 2038.
Available from The Good Life Book Club
Price $19.95
plus $4 postage

So often we are asked 'How can I stop environmentally unsound development in my area'. Well this is the book that we would point any potential campaigners to. This is a practical guide to getting your message out there.



The aim of this book is to restore "power to the people" by showing the ways and means to get your protest noticed. This is done by drawing from the experience of people who have successfully had their protest heard. Our experienced authors are able to demonstrate the main elements that make up a campaign structure.

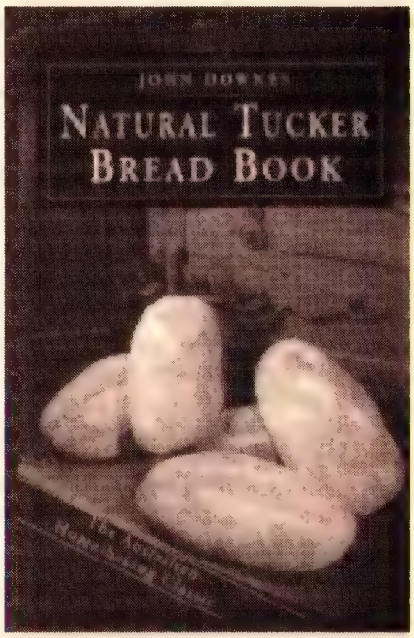
Learn from Quit Smoking campaigns, Greenpeace, BUGAUP and Aboriginal Land Rights protests. It doesn't matter if you are fighting on your own or within an organised group, this book is loaded with ideas.

Key elements such as managing the media, organising action committees and hiring professional help are put into context through case studies. Use your anger, don't let it use you. It can be a powerful force. Set realistic objectives and understand your opposition. This book is an inspirational tool.

Natural Tucker Bread Book
By John Downes
Published by Hyland House
Available from The Good Life Book Club
Price $14.95,
plus $4 postage

If you enjoy baking bread and want to expand your repertoire or if you simply want to learn the basic principles of bread baking this book has it all. This book has been reprinted three times with over 20,000 copies sold. I think that makes it the Australian bread makers' Bible.

This book is much more than a bunch of yummy healthy recipes, it is a complete analysis of the ancient art of bread making. John Downes points out that people owe an awful lot to the humble loaf. It was through bread that our ancestors could be sustained by grain crops. Man could cease wandering and

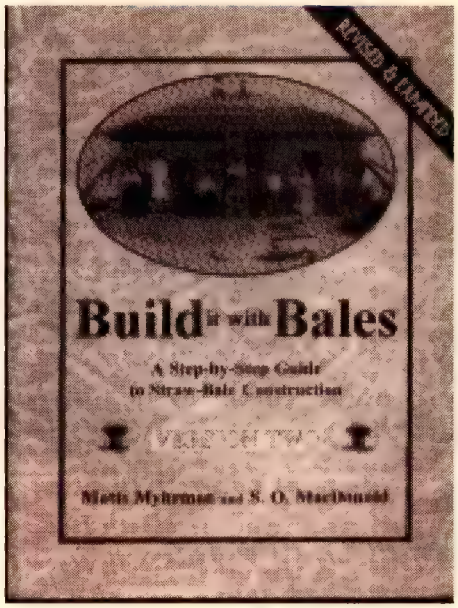


establish ordered civilisation. A real loaf of bread is born from freshly ground flour, pure water and salt with leavening agents. It does not contain the chemicals and packaging associated with the product on the supermarket shelves today.

By dividing the book into two parts, John is able to take potential bakers through all the steps of bread making. Part one discusses in great detail ingredients and where to get them. Understanding the qualities of flour and leavening agents is essential. Flour milled from higher protein or harder wheat is more suitable for bread baking. It is often called 'strong' and doesn't make good biscuits or pastry. John recommends owning your own grinder as the more freshly ground the wheat, the better the loaf. Boy! He is serious.

If any of this sounds too hard don't be discouraged. The 60 recipes contained in this book are a must and the extensive glossary will help you through any tight spots. The list is inspiring from basic sour doughs, yeast breads, unleavened breads, through to special breads (croissants!). I'm going to launch into my new bread baking career following the sesame wheat bread recipe, based on tahini with miso as a salting agent, this one sounds like it's for me.

Build it with Bales
(A step-by-step guide to straw-bale construction)
version two
By Matts Myhrman and S. O. MacDonald.
Published by
Out On Bale
Black & White, A4 format, 140 pages.



Price $54.95 plus $8 postage. Available from the Good Life Book Club (03) 5424 1814.

This is without a doubt the most comprehensive straw bale building book I have seen yet. Written in truly practical words it offers a step-by-step guide to all aspects of straw bale building. In the original *Earth Garden* style it gives inspiration as well as confidence to both the professional builder or lay person. This is a key publication for those who are interested in, or support, the natural building movement.

By dividing the book into two parts our friendly authors are able to make you think seriously and thoroughly about what you need to know before you build (Part One) and what you need to know as you build (Part Two). Part One looks at issues such as bale content and construction, how many bales, insulation site considerations and preparation, preparing a design and building methods — just to name a few! Part Two studies the non-load bearing option and the load-bearing option, from foundations all the way to the roof. Every detail is considered. By using detailed, cut-away diagrams of the two options it is very easy to see what each building method consists of therefore giving any potential owner builder a full understanding on which to base their choice.

The strength of this book lies in its detailed diagrams and drawings. At a glance you can understand how doors and windows are built in, or how to allow for the fixing of cabinets and decorations to straw bale walls. The issue of plasters and renders is fully explored. Ideas and recipes are given once again allowing the novice to make a well informed decision. Practical experience is the heart of this book.

Twenty years ago the 'Earth Building' movement was considered off-beat, and perhaps something penniless hippies did. Nowadays the movement has become broadly accepted throughout the community putting all sorts of people into better low-energy, cost-efficient homes.

This book is perhaps one of the ways that more home builders from all walks of life (off-beat and mainstream) will come to appreciate the environmental advantages of straw bale building.

If you are concerned about the price of this book I would have to say it is well worth every cent. This is a worker's manual and an absolute must for anyone seriously considering straw bale building.

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ISSUE THREE AUTUMN/WINTER 1999

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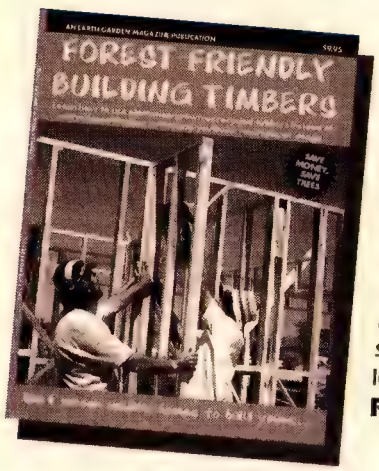

Forest-Friendly Building Timbers
Edited by Alan T. Gray and Anne Hall
Now anyone with even a vaguely Green bone in their body can do the right thing by forests when next they design, build, or renovate. This is a consumer guide to using plantation and recycled timbers in building projects instead of using increasingly-rare native forest timbers. The book details uses and products from stumps through to rafters, and everything in between. An historic new book that has been hailed as a win-win solution for forests and jobs by some of Australia's leading environmentalists.
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Melinda Coss
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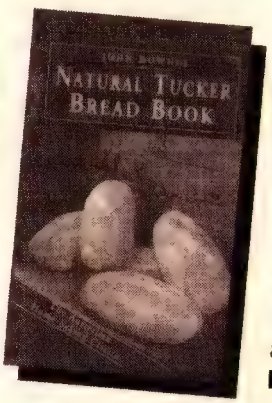

The Natural Tucker Bread Book
John Downes
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7. BOMBALA. 100 acres. 25 km south of Bombala. Trout river frontage, 2 huts, power and phone available. $55,000 firm. Phone/fax (02) 6291 4333.

8. FAR NORTH COAST. 35 km n.w. Lismore. Beautiful solid spacious home. Wide verandahs. Elevated position. Extensive views. 4 acres. U/house garage and workshop. Organic gardens. F/trees. Complete privacy. Power, telephone, cabin, u/cover caravan, school buses. $159,000. Phone (02) 6633 7033.

9. KANGAROO VALLEY. 100 acres of pristine

bushland. Never fail spring, waterfalls, fertile soils, rainforests, orchards, unique micro-climate perfect for permaculture. Sweeping valley views. Complete privacy. 160 km south of Sydney. $280,000. Phone/fax (02) 9960 4712, mobile (0409) 20 9909.

10. PINEVALE. Lifestyle retreat, Dubbo-Dunedoo. 952 acres (385.3 ha) F/H. Approximately 350 acres open farming and grazing, balance of natural timber, 5 dams. Modern 3 b/r air conditioned home, 2 b/r cottage with office, steel lockup workshop with office, grain and machinery storage, shearing shed, stockyards. Price $150,000 ono. Contact Elders Dubbo (02) 6882 4422.

11. VIA BUNGENDORE. 40 minutes Canberra CBD, 90 year old house, lots of character and well heated (central woodheater feeding radiators in bedrooms). Four large bedrooms, sunroom and verandah, mostly timber floors. 5 acres, bore, beautiful established gardens with magnificent spring display, old variety fruit trees, huge enclosed vegetable garden (wombat, roo and rabbit proof), herb garden, chook-yard, numerous sheds, shearer's quarters, 3 car garage. Strong local community in beautiful area. $180,000. Ph. (02) 6238 2134 or email: <seamagic@dynamite.com.au>.

12. FAR SOUTH COAST. 500 acres, 16 kms N-NW Bega. Semi-rainforest. Panoramic mountain bushland. Ex-cattle country. Heavy revegetation. Timbered with creek flats. Three dams, distant views of Bega, sea. Abundant wildlife. Mudbrick shed and housesite. $225,000 ono. Phone (03) 9763 2757 Bega (02) 6492 7266.

13. HUNTER/BARRINGTON TOPS. 3 Br country style house on 1 acre, 20 mins. Dungog, 1-1/2 hr Newcastle, 3 hrs Sydney. Borders wildlife refuge, town water, wood & gas stoves, slow combustion heating, biodiverse organic gardens & exotic fruit tree orchard, established native gardens,

birdlife/native animals abound, high rainfall/temperate climate, walk to safe swimming hole, large shed, zoning for B & B/cafe. Ideal tourist location, school bus, $155,500. Phone (02) 4995 9308.

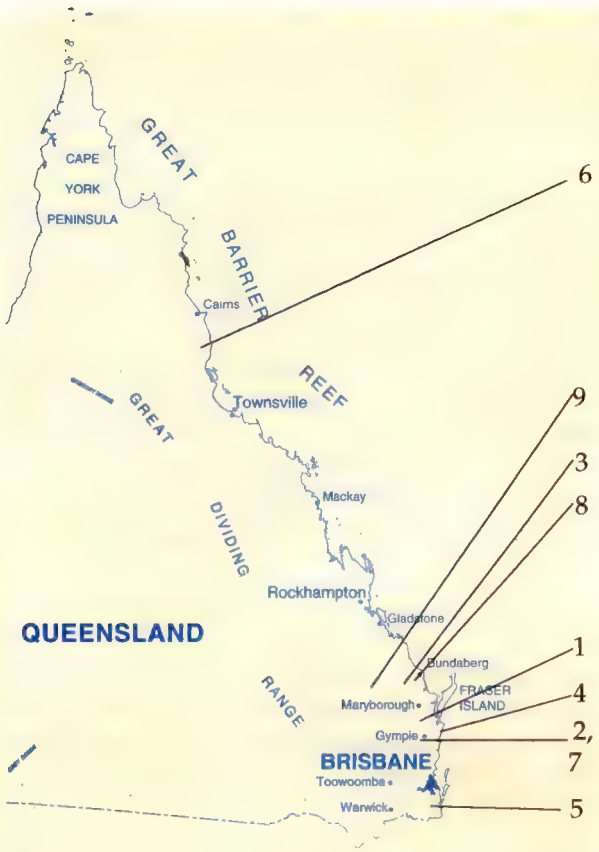
14. EDEN. Gorgeous block inland from Eden, near the Vic/NSW border. 120 acres, km creek frontage, good water and soil, heaps of wildlife, close to beaches, lakes, nat. parks etc. Very secluded. $79,000.

QUEENSLAND

1. SUNSHINE COAST, 13 km from Maleny. 1 acre rich red soil, cleared gentle slope. Two bedroom steel framed house. Large fern house, good bore, excellent climate. Rural. Ideal small crops, herbs, etc. $135,000. Ph. (07) 5494 4069 Patricia.

2. BEST OF BOTH WORLDS. Just 45 mins. commuting to Brisbane from the North Coast rooftop. Near new modern 3 bedroom home surrounded by bush. $139k. (07) 3309 1348.

3. PEACEFUL RURAL LIVING. 525 hectares (1312 acres), freehold, 3 titles. 5 mins. Mt. Perry township (school, PO, store, etc), 50 mins Gin Gin, 1-1/4 hours Bundaberg. Bitumen road frontage. Two bedroom well maintained wooden dwelling, carport, shed, septic, electricity, phone, good garden water and soil, trees grow well. Carry 140 breeders or 220 growing cattle. Cattle yards, 8 dams, some harvestable timber, nice bush walking. If you're hankering



for a rural lifestyle with some income opportunity, this property would be perfect. $225,000. Phone (07) 4161 3136.

4. NATURAL LIVING. Towards self-sufficiency. Adobe house 10 by 16 m plus paved verandahs 3 bedrooms plus study, carpet and cork throughout, slow combustion stove and 3 way hot water! Office 7 by 8 m brick air conditioned. 3 bay carport, tractor and slasher small shed on 1 1/2 acres bounded by permanent creek. South East Queensland Sunshine Coast (07) 5486 5230 $145,000 ONO.

5. BAHR'S SCRUB. 9.38 acres, beautiful virgin bush, magnificent trees, wallabies, koalas, complete privacy off short cul-de-sac in peaceful 'green belt' yet within Brisbane phone area, great SBS reception, all sealed roads to gate, 10 mins to Beenleigh (shopping centres, primary & high schools, medical, express train to Brisbane & Gold Coast), 30 mins by car to Brisbane CBD, Gold Coast or Mt Tamborine, mostly gentle SE slope with plenty of useable land, prime dam site, several excellent house sites, all with views, protected by hill on block with city views, perfect wind-generator site, elec avail, low council rates. $99,000. Phone Garry (07) 3807 6669.

6. ONE BEDROOM COTTAGE. To extend on. 1/2 acre backing onto rainforest, stroll to beach & corner store. Lots of fruit trees, palms, bamboo. All amenities. 50 km south of Innisfail. $105,000. Bingil Bay. Ph. (07) 4088 6110.

7. SALE. Peaceful 2 acres near Gympie, QLD. Gently sloping east from valley rim. Top quarter level, treed, rest good soil. Power. Lovely view of green valley. $30,000. F. Bardsley, PO Box 109, Tin Can Bay, QLD, 4580.

8. BUNDABERG. Queensland, Kookaburra Park Eco-village, we have a few 1 ac freehold buildings lots left. If you would like to be part of the solution. We invite you to join us at our village. Our motto is care of the land and care of the people. Only people who are prepared to take back their power and live in co-operation, peace and harmony. Thank you. For more information phone (07) 4157 2850 or (07) 4157 2759 email kookaburra@sunweb.net - http://www.sunweb.net/kooka/welcome.html

9. RELUCTANT SALE. Work transfer. 72 organic acres, near complete weatherboard house, solar power, many fruit trees, permaculture gardens, electricity past gate, school bus 3/4 hr west Gin Gin, large work shed 3 full dams, running creek, bore, tractor, many extras, $100,000 neg. Phone (07) 4066 9028.

VICTORIA

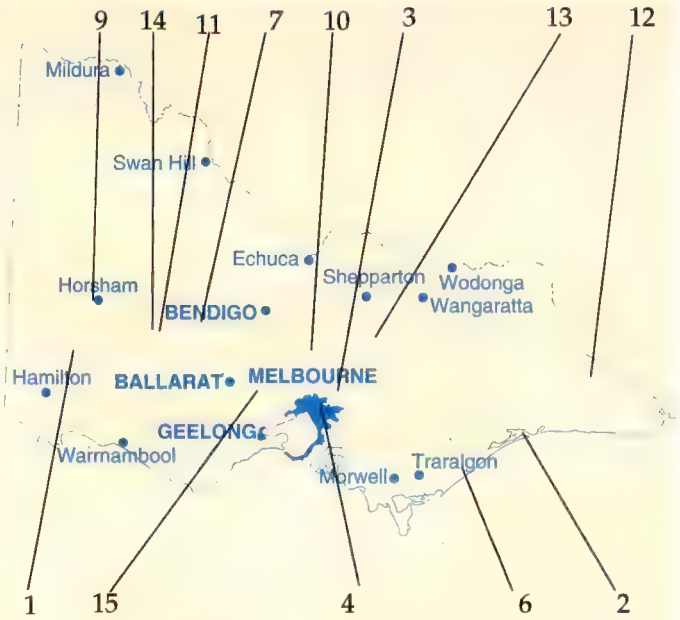
1. ARARAT. Country life with city services. Immaculate solar passive and insulated Aussie Clear treated cedar cottage with fuel heater, gas hot water and stove, two bedrooms, spacious living area, and plenty of outdoor living adjoining small bush reserves and creek. Suit permanent or weekender. $63,500. Openminded to swaps, vendor terms (03) 5356 2321.

2. EAST GIPPSLAND. Secluded 30 acre property, 15 mins. east of Lakes Entrance, 4 hrs from Melbourne. Perfect for hobby farm or quiet weekend retreat, close to 90 mile beach, Gippsland lakes and snowfields. Mostly cleared,

securely fenced with permanent creek and ample water storage. Generator and solar powered independent electricity supply. State Forest boundary, situated at the end of private road. Neat & cosy 2 bedroom cedar home with verandahs, open living and exposed timber lining. Paved courtyard and semi-detached 2 room bungalow. (03) 5155 7257.

3. DANDENONG RANGES-OLINDA/MONBULK. 3/4 acre magnificent mountain ash. Resident wombat. Nth aspect, sloping. Made road. Ideal for sustainable house. Phone Ron 9755 2836.

4. ENVIRONMENTAL LIVING. Round The Bend Conservation Co-operative, Kangaroo Ground, Melbourne. Are you looking: for a place to build your dream home, to live in harmony with nature, for shared access to 327 acres of Box Ironbark bushland, to participate in community decision making and practical environmental caring? For more information contact: Fabio 9712 0615 or Kerry 9712 0354.



5. FREE. Country Property Catalogue, available now! Land from only $5000. Phone (03) 9852 3322.

6. SEA LAKE 2 BR HOUSE. SEC, town water, electric cooking & shower, gas heating, garden shed. $19,950. Phone (03) 9852 3322.

7. LAKE LAANECOORIE. 50 acres only 1 km to lake, creek on land $42,500. Phone (03) 9852 3322.

8. A SHACK. On 50 acres mostly treed, sandy loam soil, gently undulating in peaceful area! $29,500. Phone (03) 9852 3322.

9. BUSH BLOCK. Horsham, Western Victoria, 9 km's south of Horsham. Approx 40 ha. 1/3 cleared paddock, rest bushland. Bought by Trust for Nature to protect this rare woodland and associated threatened birds. Block will be sold with protective conservation covenant which allows for house and stock on the paddock. The land is next to two other bush blocks which altogether form a sanctuary of 100 ha of bushland. Ideal as bush hideaway while still being close to large provincial town. Good fences. All weather road to gate, power and phone nearby. $75,000. Contact Paul, Trust for Nature (03) 9670 9933, or free call (1800) 999 933 or email <paulf@tfn.org.au.>.

10. BARFOLD GORGE. Kyneton North, Central Victoria. Own your own piece of a spectacular gorge on the Campaspe River just 20 km north of Kyneton, 30 mins from Bendigo. This National Estate listed basalt gorge features amazing geological formations and threatened grassland plants. Approx 47 ha most of which is farmland. There is a conservation covenant on the property, that allows for normal agriculture across the farmland and provides full protection for the gorge area. There is an all weather road to gate, power and phone close by. This accessible property is an ideal opportunity for those interested in combining conservation and farming. $115,000. Contact Paul, Trust for Nature (03) 9670 9933, or free call 1800 999 933 or email <paulf@tfn.org.au.>

11. BEALIBA. Heated hut, school, coach stop, services, low rates, 1/4 acre bargain. $5900. Phone (03) 5469 1204.

12. EAST GIPPSLAND. 450 acres, 18 kms south of Delegate. 2 bedroom cottage, very pretty valley, 80 acres cleared, 8 dams, cattleyards & sheds. $150,000. Phone/fax (02) 6291 4333.

13. STRATHBOGIE RANGES. 20 km east of Euroa. Chestnut farm. 500 to 600 trees. Fruit orchard and trees galore. 61 acres of pristine land with excellent views. Unlimited spring water. 2 spring fed dams and a well. Cottage and bungalow in need of restoration. Large shed and car ports. School bus past front gate. 12 mins to Euroa. $200,000. Phone/fax (03) 5795 1143.

14. MUD BRICK COTTAGE. Double storey, 4 acres, 2 bedrooms, alternative power, orchard, dam. Landsborough. $42,000. Phone (03) 5472 5014.

15. BALLAN AREA. Easy access to Melbourne, 65 peaceful acres, some grazing, some bush. Creek, dam, gullies, homesite, power, koalas and other wildlife. Adjoins state forest. Mudbricks available. $72,000. Phone (03) 5437 5293.

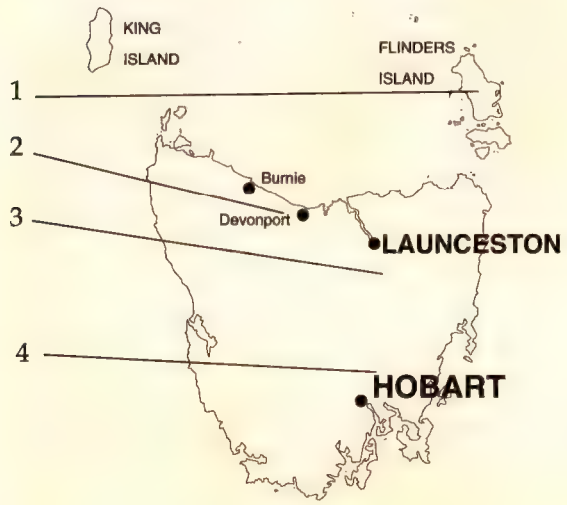
SOUTH AUSTRALIA

1. QUORN (FLINDERS RANGES). 10 blocks, 7—10 acres, from $9,500. Stunning 360 degree views of near and distant ranges. Power and water. Close to town. Rare opportunity for owner-builder, horse lover or growing arid land free crops such as olives, quandongs or grapes. Phone (08) 8675 2683. Email: <bobtulloch@bigpond.com>.

2. ELLINGEN/THORA VALLEY. Magnificent 3BR timber and stone house on 4 share 55 acres organically certified M.O. River frontage, mountain and national park views. Landscaped gardens, underground power, solar hws, gas and sc stoves, sc heater, cathedral ceilings, French windows onto extensive verandahs, rainforest pathway to glorious swimming hole. Garage. Concrete block shed. Two timber plantations 1000 Silky Oaks, 100 Hoop Pine, (tax concessions, superannuation potential). Communal electric pump, irrigated orchard, tractor, slasher, etc. Sealed road frontage. State and Steiner schools near by. $162,000. Phone (08) 8088 3804.

TASMANIA

1. FLINDERS ISLAND. One hour's flight from Melbourne. Large 4/5 bedroom home of 15 acres with water frontage. Two excellent workshops with overhead travelling crane, solar heating, 3 dams, rainwater tank, power, perfect vineyard site. Over 50 square ideal as an artists co-operative and studio. Phone (03) 6369 5465. $85,000.



2. OPPORTUNITY FOR SHARE. In specialised herbs for medicinal purposes farm. Suit horticulturist, some capital required 1 hour from Devonport Tasmania. Phone (03) 6492 1424, fax (03) 6492 1383.

3. LIFFEY VALLEY. 4 bedroom b/v home on 20 acres mostly cleared land. Orchard with apples, stone fruits. Dam, sheds, power, school bus. Mountain views. High rainfall and fertile soil suitable for crops, flowers, horses anything! Close to bush walking, trout fishing. 1/2 hour to Launceston. $138,000. Phone (03) 6395 2039 for more info and photos.

4. RURAL BACKPACKER PROPERTY. 3 bdrm house, vegie garden, sheds, fowl yards, small mixed orchard. 20 bed hostel building plus 6 separate twin rooms, 4.4 ha. Town water, sewerage. Fenced grassed paddocks, 400 heritage (200 varieties) apple trees. Maria Island National Park. 10 mins beaches Triabunna; school K/10, medical centre, shops, banking. 90 km NE Hobart, $95,000. Phone (02) 6241 2201. <http://www.ozemail.com.au/~roknox/welcome.html> or email <roknox@ozemail.com.au>.

FOR RENT

NEAR TARAGO. 40 minutes from Goulburn, Braidwood and Bungendore. Two bedroom cottage, air conditioning, wood heater. Large poultry run, household orchard with irrigated vegetable beds. $160 per week. Optional 2 acres certified through NASAA for organic production of vegetables, fenced irrigated, tractor and implements. Negotiable. All situated on 100 acres of bush/wildlife refuge. Ph. (02) 4262 2254 or 0408 624 623.

WANTED

WANTED. Land 50 plus acres. Seymour-Whittlesea area. Native forest or trees. Not intended for pasture or traditional farming so poor soil, rocky, hilly or undulating terrain is okay. Must have year round water, creek or spring. Some cleared or flat land okay. Write SV, 26 Coulstock St, Epping, 3076, Vic.

HELP WANTED on small organic property in remote East Gippsland settlement. Prefer person/s with some practical experience. Labour in exchange for accommodation in rustic candle-powered bark hut by the Brodribb River. Work hours for accommodation negotiable. Goongerah Valley is surrounded by forests. Conservation-minded Earth Gardeners make up the bulk of the community. For more detailed info. write to "Jacarri" Private Bag 3, Orbost, 3888.

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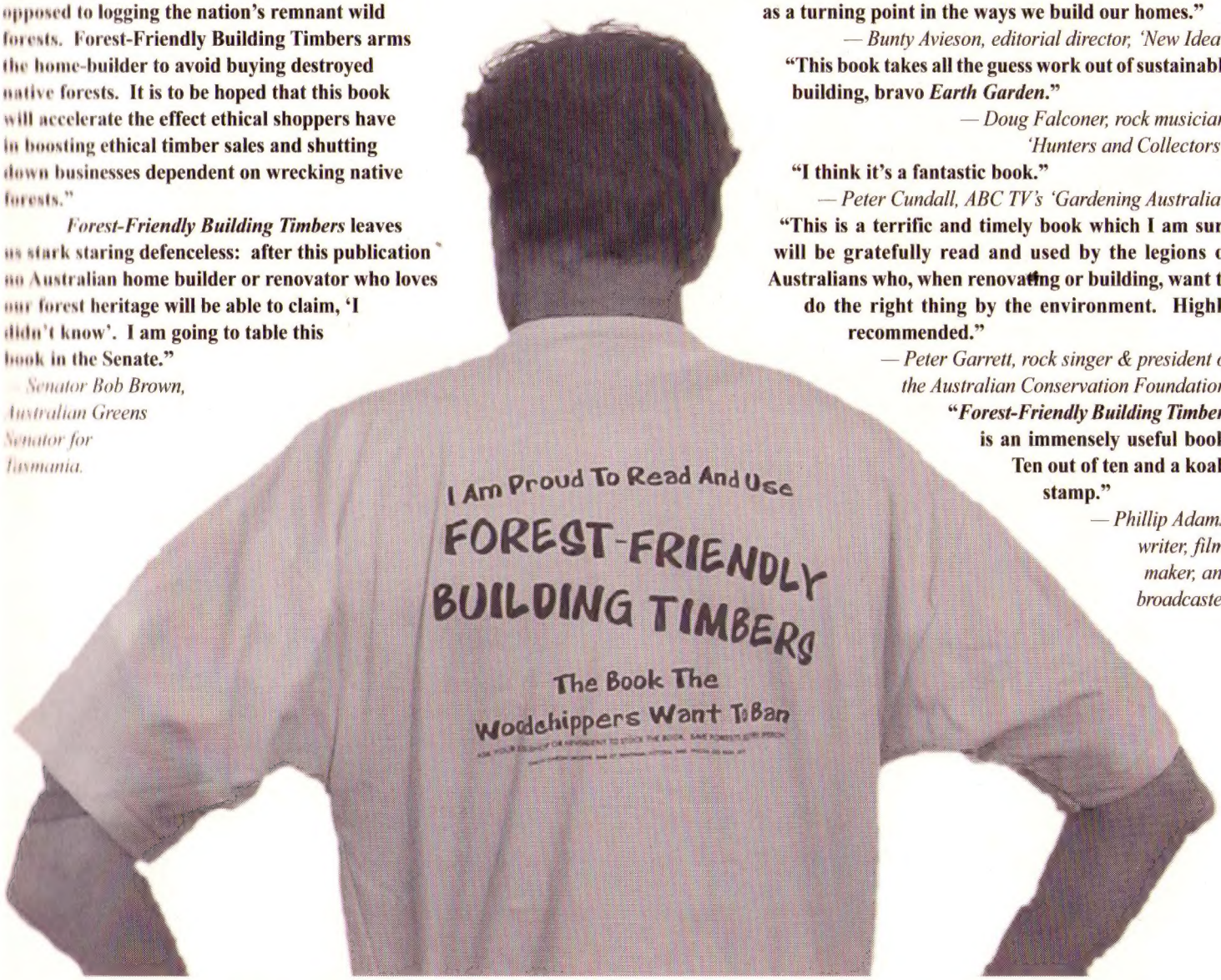

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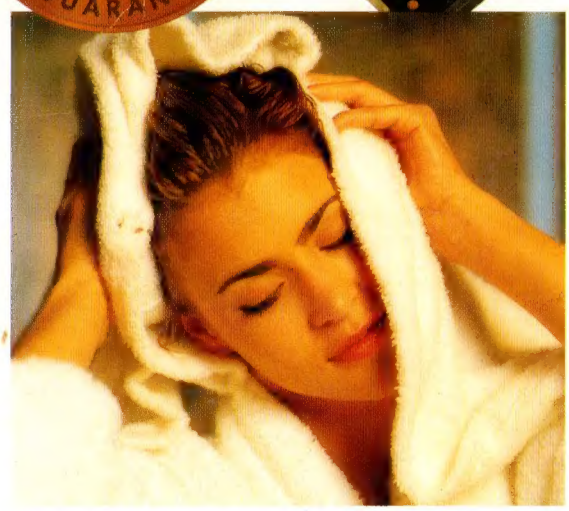

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